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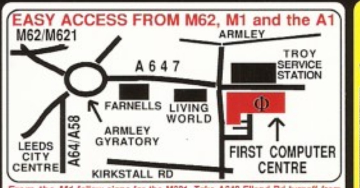
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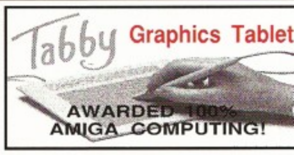
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IN THIS ISSUE

AMIGA SHOPPER FEBRUARY 1995 No 46



***A** wise man once told me that "a rolling slug gathers no moss". Wise words, I think you'll agree. In the spirit of the aforementioned slug, we here at Amiga Shopper are forever looking to push forward the boundaries of magazine publishing. We don't have any comprehensive roundups of slug rollability, but we do have the real story of the rise and fall of Commodore, not to mention reviews of three new graphics programs. What more could a downwardly mobile slug ask for?*

Richard Baguley – Editor

Visual Vibrance

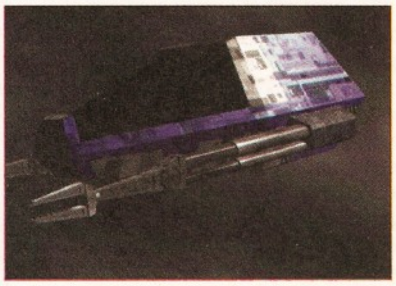


Three new graphics programs have hit the scene. Which could turn you into a pixellated Picasso?

PAGE 26



Is Wordworth 3.1 Just what the doctor ordered? Will Wordworth 3.1SE fill a hole in the word processor market? Jeff Walker examines them both on page 21



The second D of 3D is... Decoration. Learn how to wallpaper your virtual world with Mojo of Foundation Imaging – on page 32.

FEATURES

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TUTORIALS

REGULARS

AMIGA SHOPPER STAR PERFORMER

Your chance to vote on the best Amiga products! Plus, you could win a spending spree! See page 39.

COMMODORE – Sold to the UK?

Still no firm decision, but both CEI and Commodore UK are confident of buy-out success.

Both bidders in the ongoing Commodore buy-out saga are confident of success. David Pleasance (head of the UK bid) is confident of signing a deal in early January, while Alex Amor (head of Creative Equipment International (CEI) believes that he will have tied up a deal with the liquidators before Christmas.

Meanwhile, rumours were circulating that the bid from Florida based CEI has failed, as one of their main backers is rumoured to have pulled out.

However, CEI Boss Alex Amor denied this. "I'm afraid that the rumour has been started by one of our competitors. Let's just leave it at that. We have been in this thing for the long term and once the package and the partners are brought to the table, the industry will look at it as a maintainable acquisition. One of our partners is one of the world's leading manufacturers, so I think this will be a big boost to the Amiga community."

Although CEI are based in the US, the European market features very highly in their plans. "85% of our advertising budget is designed to push the A1200 and CD32 in the UK Market, and the budget is more than Commodore UK spent in the last four years of operation," Alex Amor announced. "Our preliminary plans call for 36 individuals in the UK office."

If his bid is successful, Alex hopes to get new Amigas into the shops in March or April. "I believe we can be successful with that if there are no obstacles. There have been a lot of changes taking place. It has been a dynamic situation. However, I think now we are in a situation where they realise that a closure (of the deal) needs to occur soon. We are talking to the engineers on a daily basis, so I think we have the ability to do something quickly and bring it back on line."

The Amiga has always been successful, partly thanks to its excellent software bundles, so what would CEI be planning to get the Amiga back up where it belongs?

"We would bring the A1200 back with a sort of re-introduction bundle, which would include somewhere between twelve and fourteen software titles. We would just like to show that we are back very strongly and that this is a company that understands the market better than the old one."

If his bid succeeds, what would be the fate of Commodore UK? "I have made an offer several times that we were more than happy to work together (with Commodore UK), but they have not wanted to do that, so we will proceed on our course. We have good plans for the UK market. I know there are smoke and mirrors being held up in the UK by our competition, but I think this is going to come right down to the end."

Meanwhile, David Pleasance is very confident about the prospects for his own bid. This was lodged with the liquidators on Tuesday 6th December, and a deposit was paid at the same time. "We have already put a substantial amount of money in the bank," he told Amiga Shopper at the World of Amiga Show.

"There is a meeting of the Creditors on the 21st of December where we will try and get their approval for this bid. We don't need the creditors approval for the process, but it would be easier, because we want to take the jurisdiction from the US court (where it would take months) to the Bahamas. If the creditors agree... we will then go through the same court bidding process in the Bahamas as is compulsory in the US." This process is likely to take about three weeks from the time the creditors approve the deal, although this may take longer due to the Christmas break.

THE BIDDING AND MYSTERY BACKERS

The bidding works in a fairly simple way – Commodore UK make a bid and the other bidders have to bid half a million pounds more. Commodore then have the option to bid more. "That shouldn't take more than a day, or perhaps a couple of hours." David Pleasance said, "this (the buy-out process) has been longer than re-runs of Dallas, but three to four weeks shouldn't make much difference. We hope to make an announcement within three to four weeks (ie. mid January) that we have the Company".

So who is putting up the money behind the UK bid? David Pleasance wasn't saying, but it sounds like somebody big. "I can't tell you (who the backers are), but when you find out you will realise that it is extremely substantial and will give the Amiga an immediate worldwide presence," said Pleasance. "It's not just a normal management buy-out. We would run the business organically and within three to five years go on to the stock exchange. We have to be very careful, because there are a lot of things at stake. Until the ink is dry, we can't tell everybody what we have planned, but we think you will be genuinely surprised."

Although there is no firm information on who will win the bidding process and acquire the remains of Commodore International, it is very unlikely that any new Amigas will be in the shops until April.

"I would say that, all things going according to plan, we would get Amigas back into the shops in April," Pleasance confirmed. "The biggest problem is ordering the components. We have stocks of the custom chips in our manufacturing plant... the main problem lies with parts such as the DRAM, because Commodore obviously doesn't have an allocation at the moment. Fortunately, we have a lot of support from the peripheral manufacturers. It's just a question of the timescale... you order something and it takes twelve weeks to manufacture."

AMIGA SHOPPER GETS AN UPGRADE!

Next month sees some big improvements to your favourite Amiga magazine. The March issue, on sale Tuesday 7th February, will be the first to feature two coverdisks, packed with all manner of wonderful serious Amiga stuff – complete programs (worth up to £100 in some cases!), invaluable utilities and exclusive upgrades to existing packages.

Inside there's the same essential and unmissable mix of reviews, tutorials and advice, but there's a whole new section dedicated to helping you get the most out of your coverdisks (and not just the ones on this magazine either, but also coverdisks from our sister magazine Amiga Format and elsewhere). We'll be kicking off with ten pages of stuff on AMOS Professional, as found on the January Amiga Format coverdisk.

So how are we going to pack all of this into Amiga Shopper? Simple – more pages! Each issue of Amiga Shopper will be thicker, with all of the pages printed in full colour on glossy paper. The cost of the magazine will be rising to £3.95, but we will continue to give you the best value for money for the serious Amiga user.

"Shopper will of course continue to be the only 100% serious Amiga magazine worth considering," said Future's Amiga Group Publisher, Steve Carey, "but the addition of coverdisks means we'll be able to provide much more interactive tutorials, as well as offering valuable, full-price programs." The all-new, singing, dancing Amiga Shopper is on sale in all newsagents of taste and distinction, from Tuesday 7th February. Demand is sure to be high, so reserve your copy now!

STOP PRESS

The price printed in our review of Personal Paint 6.1 is not correct.

The real price is £54.95, but if you buy the program before the end of January, and mention that you are a reader of Amiga Shopper, you can buy a copy of Personal Fonts Maker for an additional £5.

Ramiga International are on ☎ 01690 770304

OPALVISION MODULES HERE AT LAST?

White Knight Technology were showing a very late Beta version of the long awaited Opalvision Video Processor at the recent World of Amiga Show.

The developers (Centaur Developments) had originally planned to add a single chip to the Opalvision main board to give the video effects.

However, they have now decided to expand this to a whole new Zorro board, which offers a wide range of features, including user definable digital video effects (where you can take two video sources and cut between them in a variety of weird and unusual ways).

Any video signal can also be displayed in a resizable window on the workbench, so you can watch neighbours while raytracing. There is also a 35 Ns Character Generator and a broadcast quality genlock included as part of the card, which can cope with Composite, S-Video or component video signals.

There are still a few bugs in the software and hardware, but White Knight are hopeful that these minor problems will be fixed in time for a February release. The price for the Video Processor is expected to be around £1075, with the Opalvision main board (which is also required) costing around £650.

White Knight were also showing the Digital Broadcaster Elite Non-linear video editing system. This is an improved version of the Digital Broadcaster 32 system previewed in our October issue. This new card can also cope with digital D1 signals and Betacam SP component signals, moving it even further into the high end of non-linear video editing at a fraction of the price of systems on other platforms.

White Knight Technology are on ☎ 0192 822321.

Imagine a CD...



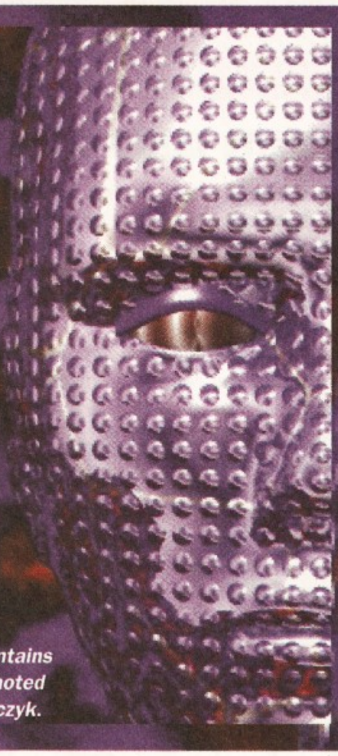
One of the objects on the CD is this excellent Harley-Davidson motorbike.

Gordon Harwood Computers are distributing the Imagine 3.0 enhancer CD, produced by the German company Oberland.

This disc contains several hundred models, textures and fonts, including a selection of rather nice images of clouds, sunny beaches and the like for use as backdrops.

The famous German Imagine user Horst Kolodziejczyk has contributed a selection of objects and some excellent renders of them.

The disc costs £49.95 and is available in the UK from Gordon Harwood's are on ☎ 01773 836781.



The Imagine 3.0 enhancer CD contains several excellent images by the noted German animator Horst Kolodziejczyk.

CYBER GET REAL

Phase 5 digital products were showing two rather nice looking new projects on the Gordon Harwood's stand – CyberVison 64 and the Cyberstorm accelerator.

The Cyberstorm is the world's first 68060 accelerator for the Amiga, and Phase 5 were showing a working prototype. This board is modular, so you can upgrade to a CPU with a higher clock speed when they become available.

At present, the manufacturing of this board is being held back by the lack of any 68060 chips, but Motorola hope to start shipping these in January, and production models of this accelerator should be available in February.

Initially, only models running at 50Mhz will be available. This gives a pretty significant speed increase – a render which took 10 mins 34 seconds on a standard A4000/040 would only take 2 minutes 45 seconds on one fitted with a Cyberstorm 68060 accelerator.

The sysinfo speed test gives a rather nice 27.79 million floating point instructions per second, against 4.84 for a standard A4000/040.

MODULAR NATURE

The modular nature of this cards means that you can ad additional features as you need them, and Phase 5 are planning an I/O module, which will have a fast SCSI-II interface, an Ethernet controller and a high speed serial port. Prices for the Cyberstorm have not yet been finalised.

The Cybervision 64 is a new 24-bit graphics card. It's based around the Trio64 graphics chip (as used on a variety of high end PC graphics cards), which incorporates a powerful 64-bit blitter which can throw data around at a stonkingly fast 100Mb per second.

With a suitably fast CPU, the card can transfer data to and from the Amigas memory at the extremely good rate of 16Mb per second.

Also built into the card is a hardware planar-to-chunky converter similar to the one built into the CD32. Phase 5 are planning to ship this card in quantity in February.

Phase 5 are on ☎ 01049 69 5481844.

Gordon Harwood's are on ☎ 01773 836781.

Studio Sounds

Ramiga were demonstrating the Silicon Studio Digital Audio Workstation system. This is based around an A4000 (fitted with a Warp accelerator) and is designed as a high-end audio workstation.

Available as a complete workstation or as an add-on card for the A4000, this system can mix up to 24 tracks of full CD quality sound at once. If you can get away with a lower sample rate (32Khz), up to 32 tracks can be mixed at once.

The Silicon Studio system is distributed by Ramiga Int. on ☎ 01690 770304

CD Squirrels

HiSoft were showing their new Squirrel SCSI Super-triple CD-ROM drive. This triple speed mechanism boasts a pretty good data transfer rate of 510K per second, is multi session compatible and has a very good 190Ms average access time. It's priced at £249.

Hisoft were also showing their latest product, the Squirrel SCSI interface. This plugs into the PCMCIA slot of the A1200 or A600, and can support up to seven SCSI devices such as Hard Drives, Tape streamers, DAT drives, etcetera.

It has a full SCSI 2 interface and is also very reasonably priced at £69.95.

Scan Yourself

Power Computing were showing an early version of their 24-bit hand scanner. Although the software is still in Beta testing, the image quality produced by this scanner looks excellent. You will, however, need a pretty powerful machine to cope with the amount of data that high resolution 24-bit images contain.

Power Computing are on ☎ 01234 273000.

New Emplant

Jim Drew (designer of the Emplant emulation system) was at the show, demonstrating the latest version of his Mac emulator and a pre-release version of the PC emulator.

Although this is not complete, it was shown running several bits of diagnostic software. Jim is hopeful of a February release, although there is still some way to go in the coding process.

The Emplant is distributed in the UK by Blittersoft on ☎ 0908 220196.

Amiga equal to the Task

Meridian Software Distribution are now supplying PC Task version 3.0.

It costs £79.95 provides software emulation of 80286-based PCs. An upgrade from version 2.0 is available for £34.95 plus £2.00 P&P.

PC Task 3.0 has plenty of new features and improved multi-tasking. New features include: support for HD floppies and CD-ROM, 256 colours for AGA machines, support for up to 16Mb of RAM, compatibility with graphics boards, emulation of several graphics modes including SVGA and serial mouse emulation.

Version 3.0 can be purchased directly from Meridian Software Distribution on ☎ 0181 543 3500.

Upgrades can be obtained from Emerald Creative Technology Ltd by sending your original program disk and order to: 54 Wandle Bank, London, SW19 1DW.

Silica Launch Fusion Genlock

The Fusion genlock, produced by Amitek, is aimed at both the home and professional market.

For a price of £99 you'll get he genlock and a free copy of the Scala HT-100 video-titling package.

The genlock has a simple design, just three setting controls and a slider. The slider controls the fading and the other controllers select the display modes, which can be picture only, graphics only and overlay.

The Amitek Fusion is available from Silica ☎ 0181 309 1111.

US Robotics drop price of Corporate Modem

US Robotics have cut the price of their Courier V.34 corporate desktop modem by £100, from £499 to £399.

A flash ROM upgrade for existing users of the Courier V.Fast Class product launched in May 1994 can be obtained by logging on to US Robotics BBS and downloading the appropriate software.

SON OF MOTION MASTER

MetroGrafx have just finished work on volume two of their Motion Master collection. The Motion Master collections are tools that add new features to LightWave. This volume comprises four new programs: Child2World, Point at, Volume Cube and Wobbler.

Although Wobbler sounds like an unpleasant affliction or something unsavoury, it's actually a useful animation tool. It can be used to simulate wobbly substances such as jelly or fat on figure. It achieves this effect by giving control over the object's blobbyness and damping.

Point at performs a function that should really have been included in LightWave 3.5. Using Point at, any object can target another. This is particularly useful when you are animating scenes that involve tracking motions, such as a gunturret targeting a plane.

Child2World is a coordinate translator. You can load a scene file and produce separate motion files for parent and child objects. This stops un-parented objects from snapping back to their original position.

Volume cube can be used to define a volume 3D space. You can then place other objects inside this volume. Velocities can be given and then a scene will be generated with all the objects bouncing around inside the volume.

If you would like to find out more about Motion Master Volume 2, or other MetroGrafx product, contact Premier Vision on ☎ 0171 721 7050.

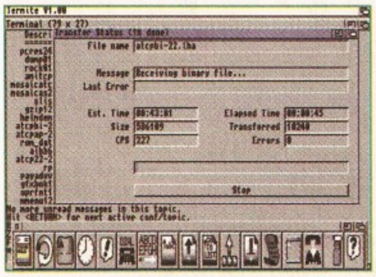

The Motion Master collections are tools that add new features to LightWave.

TERMITE TAKES BITE OUT OF COMMS

Termite is a new comms package from Oregon Research. Termite is being distributed in the UK by HiSoft for £39.95.

It is intended to be easy to use and flexible. It has support for speeds from 300 to 115,200bps and uses XPR libraries to add transfer protocols.

One of the programs best features is its user-configurable button-bar. You can assign macros, ARexx scripts and even programs. You can also add your own IFF images as icons.



The program can follow your actions and record them as a script. This is particularly useful for recording logging-on procedures.

HiSoft can be contacted on ☎ 0525 718181.

BULLETIN BOARD RAID

The ELSPA (European Leisure Software Publishers Association) have meet with more success in their fight against software piracy. ELSPA's Crime Unit raided the Birmingham-based Krypt BBS.

As a result of the raid over £3,000 of computer equipment was confiscated and the bulletin board's operator has been fined £500. As with most BBSs, users uploaded games and in return received other pirated games.

This, along with other similar operations, latest raid confirms the ELSPA's intention to reduce piracy in Europe. The Crime Unit's Chief Investigator, John Loader, has been reported as saying, "ELSPA has calculated that the cost of leisure software piracy is £778.5M in the UK alone. Obviously this degree of loss cannot continue unchecked which is why ELSPA has been so active in pursuing software pirates and bringing them to justice".

Amiga Shopper wishes them every success.

MEET OUR SISTERS

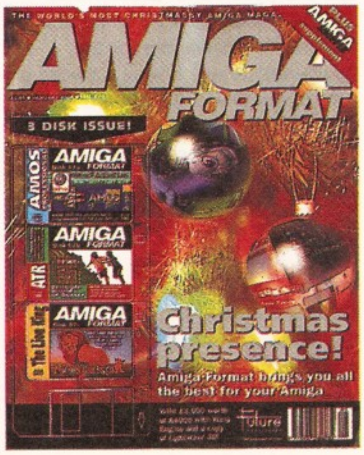


Jonathan Davies is the self-styled Editor of Amiga Power, the world's least serious and most attitudinal Amiga magazine.

"Hasten back to the newsagent and you might just catch one of the remaining Christmas Amiga Powers. (It's blue, with "Don't buy a turkey this Christmas" written on it, in case you're having trouble finding it. There are three disks on the front, with demos of Cannon Fodder 2, Super Stardust, Powerdrive, Overlord and Gunfighters on them. And there's some stuff about choosing the best games for Christmas, which could probably be adapted to apply to the New Year). Hurry, hurry!"

Sue Grant is the deputy editor of Amiga Format, the world's biggest selling Amiga magazine.

"In the fabulous February issue of Amiga Format we have wired up Suemylove and plugged her into the Internet. But, seriously folks, Amiga Shopper's own gorgeous Mr Baguley cross pollinates with AF to explain Comms and the Internet in explicit detail. Plus! We have games reviews of the latest Lemmings, a head-to-head between beat-em-ups Shaq Fu and Shadowfighter and a look at the Battle For The Ashes. And don't miss your chance to win your very own snowboard and snowboarding gear with Wella Shockwaves."



Blittersoft

EMPLANT

The World's First Multi-Platform Emulation System!

Macintosh® Emulation Module

The Macintosh emulation module is a 'generic' Macintosh with the speed of the emulation depending on the processor your Amiga is using. An A3000 is equivalent to a MAC IIci. An A4000 is equivalent to a Quadra 900. Support for up to 16 colours is provided for non-AGA machines. A4000 owners can use a full 256 colours! Up to 24 bit (16 million+) colours is supported using third party video boards such as: Picasso II, EGS-Spectrum, Vivid-24, Rainbow II, Rainbow III, Visiona Paint, Merlin, Retina, Retina Z3, Piccolo, EGS110/24, and OpalVision! Built in multiple file transfer allows for quick, easy transfers between the Amiga and MAC emulation. Support for AmigaDOS devices, Scanners, CD ROM, MIDI, SyQuest removable drives, Printers, Modems etc. Full stereo sound is supported too! Requires Macintosh ROMs (not supplied).

E586DXSM Emulation Module

We are now in the final testing stage! We have added the next generation CPU instruction set! The E586DX emulation module offers a high speed 586DX (FPU, MMU, and new instruction set) emulation with complete low-level architecture support, giving you the ability to run DOS, OS/2, NT, Windows 3.x, and even Chicago! Support for MDA, CGA, EGA, VGA, SVGA video modes, sound, joysticks, floppy drives, hard drives, extended memory, and more!

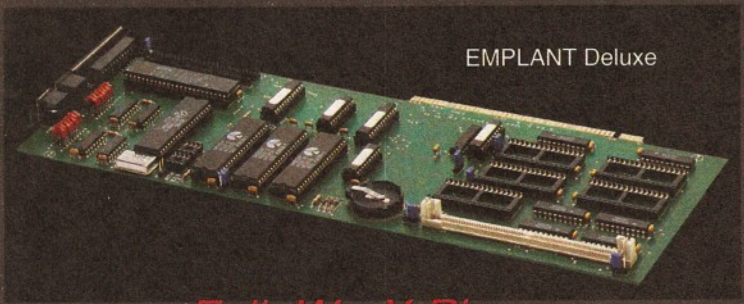
The possibilities with a multi-platform machine are endless. Now you can take advantage of a whole host of great software previously unavailable, and use them to compliment each other. By upgrading your Amiga (extra memory, faster processor, etc) you instantly upgrade your emulation too!

Blittersoft are the exclusive European distributors for Utilities Unlimited. We provide the only full technical support service, as well as software upgrades to all official UK boards. Check before you buy.

Four different versions of EMPLANT are available. (All Zorro II)

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NEW NEW NEW NEW CD32 EMULATOR ***NEW NEW NEW NEW***

This new software package will turn your AGA machine into a CD32, even booting CD32 games via a special launch sequence as you boot up. You can alter volume, emulate the controller via keyboard, use joysticks, set language, save high scores etc.
Total compatibility cannot be guaranteed, but has proven to be very good with many tested titles. (Microcosm, SleepWalker, James Pond II etc, etc.)

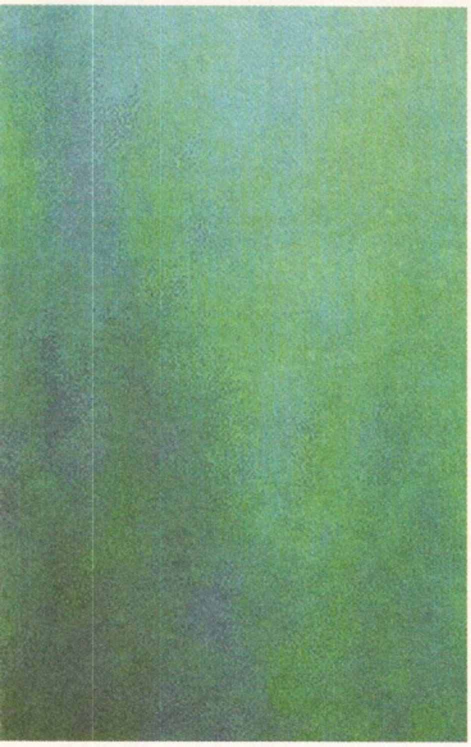
Also includes CD Filing system, Search/Mount software and JukeBox programs. You will require a suitable CD drive such as any of the Toshiba drives found in this advert.

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Now available for a range of machines. This new operating system will bring your machine up to the very latest revision.
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At the crossroads

Commodore's history has been marked by a series of crucial turning points. Tim Green wonders whether its latest crossroads is the start of a new direction, or the beginning of the end.

First there was the typewriter. Then came the calculator. The boom times arrived with the computer. Now, it's all down to the liquidator. Yes, Commodore's history has been marked by a series of crucial turning points. The question is whether its latest crossroads is the start of a new direction or the beginning of the end.

Forty years after a typewriter repair company called Commodore Business Machines was founded in Brooklyn, a one page press release announced that the company was preparing the first stages of an "orderly voluntary liquidation". Commodore Electronics, the US manufacturing and distribution subsidiary, and the overall holding company Commodore International transferred their assets to trustees.

These "trustees" sought the protection of the Bahamian courts where the company is registered. It was not quite liquidation – closer in fact to what the US calls "chapter 11" in which a period of protection from creditors gives the money men time to work out a rescue plan. But, whatever the technicalities, it was definitely the end of the old Commodore order.

That was April 29, 1994. At time of writing in early December there is still no change in the overall situation and no buyer. Speculation has been intense. Rumours have connected Sony, Philips, Nintendo and Samsung with the company (although only the Samsung speculation seems to have had any basis in fact). Now though it looks to be a two way chicken shoot between a Commodore UK management buy-out and a bid from US electronics distributor Creative Equipment International. Unfortunately the uncertainty has meant that Christmas 1995 will be the first for nearly a decade to have no new Amiga bundle.

The Maidenhead team talk of a great fight. They claim to have a backer with deep pockets and a public profile. "You wouldn't believe how big and well-known they are" said one source. Tantalisingly, they won't say any more. But the team must be getting restless. Commodore UK's bid has a lot going for it. Besides this mystery backer it can point to years of success in the British market while its global parent lurched from disaster to disaster. For a while the bid looked a dead cert too. Joint MDs David Pleasance and Colin Proudfoot were so expectant that, in October, tickets for the launch party of Amiga International (for that is its nominated name) were sent to the UK's Amiga community. The party is now on hold.

CEI's confidence is high too. The company, which has built its knowledge of the Amiga market by distributing the A1200 and A4000 in the US, is said to have lodged $1 million with the liquidators, although some insiders doubt it. This cash, if it exists, is non-returnable if CEI wins the bid which is a way of guaranteeing that it won't pull out later.

> **"By 1991, the Amiga 500 was selling 250,000 units a year – Commodore was apparently untouchable."**

Whichever proposal is recommended to the shareholders (and it seems unlikely that neither will be acceptable) Commodore will re-emerge in a slimmed down, more targeted version of its former self. Territories with limited possibilities – much of continental Europe, Australasia etc – will be served by appointed third party distributors, rather than Commodore's own satellite set-ups. And the hardware range will be aimed at a more specific user group than has been the case in the more grandiose moments of Commodore's colourful history.

Whoever takes over won't have to look too far back in time to absorb the potential pitfalls that lurk in the leisure computing game. You could argue that the thing that must be feared most is success itself. The fact is, if you analyse Commodore's recent history, you'll find that things started to go downhill at the very moment when

In my opinion...

To find out what the people that count in the Amiga world think of what has been going on with Commodore, we sent the following letter to a number of retailers, developers and the like. Over the next few pages are a few of their replies.

Dear Amiga person,
As part of our ongoing coverage of the Commodore liquidation saga, we are attempting to ascertain how prominent industry figures, like yourself, feel about Commodore and the future of the Amiga.

I would be extremely grateful if you could fax your answers to the following questions back to me as soon as possible.

Sincerely,

Richard Baguley
Editor.

The Questions:

1. Why do you think Commodore International went into liquidation?

2. What lessons should the new owners of the Amiga learn from this?

3. Which of the bidders do you favour?

4. What support would you like to see from the new owners of the Amiga?

5. How do you see the future of the Amiga?

WHERE ARE THEY NOW? – DAVE HAYNIE

One of Commodore's foremost hardware designers, Dave now works with Jeff Porter (and quite a few other ex-Commodore staff) for Scala in Pennsylvania, within 10 minutes drive of the old Commodore Headquarters.

they couldn't have got much better.

Back in 1985 Commodore launched the machine which would come to define the whole company – the Amiga. Based on multi-tasking Motorola architecture it was a fearsome technological feat (at the time). But, as anyone in the business will testify, it is marketing, not technology, which brings success. After all, not many of us listen to our precious Cliff Richard compilations on DAT or watch our erotic thrillers on betamax.

So it took a while for the praised heaped on the Amiga's capabilities to be backed up by consumer cash. Commodore, of course, had tasted success before. Having become a household name thanks to its range of calculators in the seventies it successfully entered the computer market with the green-screened PET in 1977. This was followed by the equally popular Vic 20 and later the Commodore 64. Both machines were based around the 6502 processor. This was crucial because the same choice had been made by Acorn and by Apple in its early models. This meant that there was a substantial amount of programming expertise for the 6502. Software support was strong.

The C64 was an unprecedented cash cow. To date an amazing 13 million have been sold worldwide. And they continue to sell in modest numbers in developing countries and on mail order in the UK. Commodore developed both cassette-based and cartridge-based versions of the machine, evidence that the company had a highly developed sense of the consumer mentality.

By the time the Amiga came along, the huge boom in leisure computing that had built up around the C64 – the Sinclair Spectrum and the Amstrad had subsided. It was time to start again. But it wasn't clear to anybody how Commodore intended to do it. The Amiga 1000 cost over a grand – hardly consumerville. And yet Commodore was no expert in the professional market.

"Cometh the hour, cometh the man." Steve Franklin was too much of a bruiser to be described as a white knight, but when he arrived as MD of Commodore UK things began to fall into shape.

> **"The Maidenhead team talk of a great fight. They claim to have a backer with deep pockets and a public profile."**

At the time, the fledgling 16-bit market that the Amiga wanted to gate-crash was dominated by the Atari ST. This was a supreme irony since the ST had been created by Shiraz Shivji, formerly Commodore's hardware designer, and Atari was being run by none other than Jack Tramiel. But the electronic wife-swapping didn't stop there. The Amiga was designed by a team that included Jay Miner, the man who was behind the astronomically successful Atari games console.

All of which is interesting, if somewhat gloriously irrelevant to the battle that lay ahead for the 16-bit market. Franklin quickly recognised that the Amiga needed to be pitched as the ultimate

WHERE ARE THEY NOW?





David Pleasance (above) and Colin Proudfoot (left) are currently involved in a bid for a management buy-out of the remains of Commodore UK. For the latest news on this, turn to the News section on page 4.

In my opinion...

Jolyon Ralph is Technical Director of Almathera Systems, the company responsible for Amiga packages such as Photogenics. As such, he's been at the cutting edge of Amiga development and certainly has strong opinions on the questions we asked...

1. Simply because of bad leadership. Medhi Ali was given good advice throughout his time at Commodore but chose to ignore it (for example by launching the Amiga 600 which nobody really wanted).

2. Take more notice of your users and developers. Build machines people want to buy. Keep on producing innovative products and forget trying to 'crack' the US market. It won't happen!

3. Both Commodore UK and CEI have both said very positive things about the future of the Amiga and either will almost certainly run the company very successfully, however, CEI have no real experience in running this sort of operation and are very much an 'unknown entity' in Europe.

Commodore UK understand the European market much better and already have good links with European developers and distributors. Given a chance to have control of the Amiga I think Commodore UK would do a superb job.

4. Commitment to the future of Amiga. Currently we've got various rumours floating around about future "Amigas" that will be using RISC chips, a new graphics chipset and run Windows NT.

Now, that may be a very nice computer but it isn't an Amiga! A definite statement about the future of the Amiga operating systems (i.e the Amiga we know and love) and whether it will be developed further.

5. It's gone through a very bleak year, but the Amiga will survive. There simply isn't anything else on the market to compete with the Amiga 1200 (except the Archimedes and Atari Falcon, neither of which have had anything like the success of the Amiga).

People are desperate to buy Amiga 1200s and 4000s. When the production lines start again the sales will pick up rapidly.

The future of the Amiga is good...

In my opinion...

Simon Armstrong is the head bloke at Acid Software, who are responsible for the excellent Blitz Basic programming language and boffo games such as Skidmarks and Guardian. Although he's based in New Zealand, he was one of the first people to reply to our fax:

1. It was a company controlled by financiers rather than industry people, ie the upper management did not have any clue about computers what so ever.

2. They should not let themselves be dictated by a bunch of financiers.

3. I feel sorry for both of them. The fact that the liquidators have drawn the bidding out to four months longer than necessary and hence lost a lot of momentum is completely crazy.

Either way, this Christmas is the last before the 64 bit consoles hit the shelves and effectively the last for the Amiga to do well as far as home entertainment machine is concerned.

4. They need to concentrate on shipping CD32/A1200 at a very cheap price. The range of software won't be matched by 64bit stuff for at least another 2 years.

The jump from 8 bit to 16 bit machines saw gameplay drop and graphics get better. The move from 16 to 64 bit is going to be the same.

We have faith that Amiga developers will continue to lead the way in many areas as far as cool games are concerned, and AGA still has many secrets to be discovered in the graphics department that's for sure...

5. Personally, I'd rather like to see a native version of the Amiga OS for the PowerPC chip. As Amiga OS is already display independent and the DOS is pretty simple I can't see a major hurdle in running Amiga software on the very cool new PowerPC systems that are being shipped by both Apple and IBM.

If I want to play games I'll use a CD32, if I want to render, animate, dtp etc. etc. I want the most power for my dollar and of course Intuition on the end of my mouse and PowerPC is the most logical step to take, not some very expensive 256 bit wide graphics chip. Motorola is too cool.

So if I bought the Amiga technology, I'd employ a few bright kids to port the OS to PowerPC and mass produce standard AGA machines for a dime a dozen to keep us games freaks happy.

Hell who wants to shell out 50 quid every time they want to buy a game? Not Amiga gamers that's for sure.





Jim Dionne (above) was President of Commodore US, but resigned prior to the liquidation.

Lew Eggebrecht (right) was the Vice President of Engineering.

WHERE ARE THEY NOW? – LEW EGGEBRECHT

The celebrated former Vice President of Engineering was the genius responsible for much of the Amiga's technological excellence. Eggebrecht is now chief scientist with a chip design company in California. But it is a mark of his worth that his new employers are building a facility in his native Denver. Insiders believe it's possible that Eggebrecht could have a role within a new Commodore/Amiga set-up.

leisure machine. By the time the A500 arrived prices tumbled, first to £499 and then £399. He also realised that there's no hardware market without decent software. The software publishers were about to get the Franklin treatment.

At the PCW show in 1987 he regaled about 60 of them with his plans for market domination. At the end, one stood up and told him that his company would not be developing for the Amiga as "you have absolutely no chance of succeeding...and anyway the Atari has got a huge lead". Franklin's response was terse. "We will make the Amiga the machine that everyone wants to own. If you fail to write software, you do so at your own peril. I have nothing more to say." In this one episode you can see how the Commodore boss combined salesmanship, business nous and the ability to frighten the life out of people. It was a potent mix.

> **"The Commodore organisation was a tangled web – it has even been likened to the Maxwell corporation."**

Slowly Franklin and his team (which included a Sales Manager called David Pleasance) began to turn things around. They did mailshots to C64 owners pitching the Amiga as the ultimate upgrade, they persuaded Commodore US to release funds for advertising and promotion and they courted the high street chains in an effort to secure shelf space for the machine.

Progress was made. But the clincher came when Commodore persuaded Ocean Software to bundle an unreleased game with the machine. The Batman pack changed everything for the Amiga. Suddenly the machine was synonymous with the newest, most exciting software in the business. And in one stroke the announcement of the Amiga Christmas bundle went from information to event.

By 1991 the Amiga 500 was selling 250,000 units a year. Commodore was apparently untouchable. It couldn't last. It was at this time that Sega and Nintendo began to creep into the leisure market. Correctly, Commodore assumed that it could hang on to its user base by emphasising the versatility of a games playing home computer. But it underestimated just how huge the console market would become and how many of its existing users would switch to plug 'n' play machines.

To put some distance between Commodore and the "toy" market of Sega and Nintendo the global management decided to move closer to the "serious" computer market by diversifying into the PCs. This was a terrible mistake. The PC business was, and still is, massively overcrowded, and it has made casualties of companies far more committed than Commodore. It was always unlikely that Commodore would succeed against the financial muscle of Dell, Compaq and IBM or the pile-it-high, sell-it-cheap expertise of Amstrad.

There were several embarrassments along the way. The branded "Powerline" range was not branded at all. Machines came with stickers that high-flying executive customers were invited to slap on the front of their monitors. Overall the PC division wasn't working. By the end of 1992 it had been closed down.

A similar cul-de-sac was the attempt to enter the education market. The salesmen who handled this part of the business had a much rougher time than their counterparts in the leisure division. But then they were fighting to win over a generally technophobic user-base who had their Acorns and were quite happy with them thank you very much.

WHERE ARE THEY NOW? – IRVING GOULD

Former Chief Executive Officer, 74-year-old Irving Gould is now "licking his wounds", having lost a personal fortune with Commodore. Gould has other business interests and is still pursuing them, but his work is limited because of his age.

WHERE ARE THEY NOW? – JEFF PORTER

Former director of product development, Porter is now working in Pennsylvania for multimedia company Scala. He is thought to be working on Scala's proposed set top box for interactive TV. Of nine employees of Scala based in Pensyllvania, eight used to work for Commodore. The ninth used to work for GVP, who are based within a few miles of Scala.

Another problem was the sheer number of configurations made available. The A2000? A1500? A3000? Which one to choose?

Education and business both looked like costly attempts to persuade the trade that Commodore was a serious company with a serious product that could play great games... by the way.

With hindsight it was a foolhardy philosophy. And it reached its nadir with the CDTV affair. Although acknowledged as a disaster now, at first Commodore deserved plaudits for the way it was prepared to gamble on a dramatic new platform. After all CDTV was the first CD-based multimedia machine. It could even be forgiven for pitching the machine at the family and styling it as a living room device. At the time this was an understandable assumption to make.

"The A4000 was widely acclaimed as a superior multimedia platform to the PC and the Mac."

But other errors were less forgivable. The press advertising campaign was truly awful. It comprised a line of text which didn't make a lot of sense unfurling in a spiral which was impossible to read. Given that buzz-words like interactivity and multimedia meant even less to the average punter then than they do now, maybe the ads should have been clearer.

Then there was the edict issued to retailers that the CDTV was a family entertainment product not to be displayed next to games machines. Commodore even dictated how many feet apart CDTVs and Amigas should be! So even though there was a huge Amiga user base waiting to open its collective wallet, Commodore was too fixed on jostling with the VCRs and the hi-fis for the family purse to pursue it.

Finally CDTV contravened the golden rule about good software selling hardware. Commodore itself began publishing discs in order to guarantee a supply of available software at launch. Trouble is, none of it was much good. There was boring gardening discs, lamentable edutainment discs (have you seen A Bun For Barney?) and limp games. And even when the Amiga publishers began to port over their hits they were often more unwieldy than their floppy counterparts.

Basically, there was no reason at all to buy the machine apart from addiction to Amiga technology. Fortunately for Commodore there were, and still are, quite a few Amigoids about. They must have been the 5,000 who bought the machine in its first few months.

Slowly it emerged that CDTV was too advanced a concept for the public to grasp (they're only just beginning to embrace Philips CD-i after nearly three years) and not nearly good enough technically. By the end of 1992 Commodore had completely reversed the machine's positioning and begun calling it the Amiga CDTV. By then it was too late.

The PC diversion, the decision to chase the



The CDTV (Commodore Dynamic Total Vision) was marketed by Commodore as a revolutionary multimedia player, not a computer. Unfortunately, it was not a great success...

In my opinion...

Bryan Cobley of the First Computer Centre is not afraid of voicing his opinions...

1. There are 3 main reasons for Commodore International demise.

- Bad management
- Very poor dealer customer support
- Poor marketing.

Reasons 2 and 3 are directly linked to reason 1.

2. The new owners should take notice of established dealers and their requirements.

They should have a long term business and marketing strategy.

They should invest in and communicate with their staff rather than rule from above.

They should learn the value of customer service and support, take responsibility for their products and not try to delegate their responsibility to a third party contractor.

They should attempt to support their customers with products that are expandable, innovative and upgradeable and which are not going to be replaces by some similar product six months later, viz A500+ A600 and the CDTV.

3. I personally do not favour any one of the bidders against any others.

The most important thing is that the people who succeed have the vision, determination, patience expertise and finances to put the Amiga back where it belongs in the marketplace as a highly desirable piece of kit.

4. More openness and less exclusivity with distribution.

Easier contactability with the people who can make things happen.

Better margins with sensible prices that will enable us to give better support to the customer.

A higher standard of business ethics and integrity.

Proper trust and respect between the dealer and Commodore.

Better support for the customer.

5. Dodgy! The Amiga has to become a multi platform machine and RISC-based to stay in the modern market place.

It must have multi format media capabilities.

I only hope that if, and when, this happens, there is some room left for it.

In my opinion...

John Arundel is Marketing Manager of Silica Distribution Ltd, one of the biggest computer distributors in the UK.

1. Commodore International had grown so large that marketing and promotional efforts had decentralised.

Each subsidiary was doing its own different thing and the company last the power of a single global promotional thrust.

The impact of new product was diluted as a result.

The company took its eye off of the Amiga, its golden product, and dabbled in the area of MS-DOS at a time when the market was not very welcoming and margins were non-existent. This meant that valuable resources, such as time and money, were diverted from the Amiga range.

A classic error was the introduction of the A1200 too early. The market was not ready and the A600, which was still in its ascendancy was killed off as a result.

2. I think the main lesson to be learned is the value and importance of specialising in areas you know ell and which are profitable to you.

Constant interfacing with dealers and end-users would provide feedback which is useful in determining product strategy.

3. David Pleasance and his team are fully committed to the Amiga an its users. I would favour them as I know they could do a good job.

4. One of the most important things from any manufacturer is communication.

I hope that the new owners maintain a good relationship with their distributors and dealers and via the specialist press with their end-users.

If they keep the market informed and respond to its requirements, then they will be providing first class support.

5. We are looking forward to a bright future for the Amiga.

The enquiries and orders we are currently receiving indicate that the Amiga market is still very much alive and ready for an explosion of activity – just as soon as David Pleasance's bid is accepted!

education market and the CDTV debacle put strain on the revenue building of the A500 just when the product started to lose its stranglehold on the UK market. It didn't help that the US company's top execs continued to live the high-life. A private jet used mostly by the man at the top Medhi Ali was not jettisoned until a few weeks before voluntary liquidation was announced. There's even a rumour that Ali had his own full-time car and chauffeur in the UK, despite spending just a few days a month here.

There were other signs that all was not well. Steve Franklin's golden reign came to an ugly end in summer 1992 when he left the company amid accusations of financial irregularity arising from his involvement with FMC, Commodore's appointed maintenance company. He was succeeded by his deputy Kelly Sumner, who had joined Commodore from school and risen through the ranks. During Sumner's year-long tenure there was much belt-tightening, including numerous redundancies and the relocation of machine manufacture to Scotland. But there were also successful launches for the Amiga 1200 and Amiga 4000 – machines which unveiled the 32-bit AGA chipset for the first time.

> **"Commodore UK can point to years of success in the British market while its global parent lurched from disaster to disaster."**

The latter machine was widely acclaimed as a superior multimedia platform to the PC and the Mac. It was adopted by musicians like Batman composer Danny Elfman and used by designers in Hollywood to create special effects for shows like Babylon 5. Unfortunately there were occasions when Commodore was not in a position to take advantage of its fantastic technological headstart. For many months in 1993 the UK company simply could not source any machines to sell to a hungry list of potential clients. Presumably these users switched to PCs and Macs and were lost forever.

Further evidence of a creeping desperation came in the immediacy of decisions to cut prices. The A600 fell from £399 to £299 with little forewarning, and repeated the trick in falling to £199 some months later. This didn't please dealers who had bought at the old price and found themselves losing money on overstocks. Customers who paid the old price were understandably aggrieved too.

Sumner left for Gametek in April 1993 without leaving an obvious successor inside Maidenhead. It was time for David Pleasance to return from a jaunt in the US and continental Europe. He came back to a very different set-up from the one which had made Commodore a forceful presence in the late eighties. Many senior figures had departed – CDTV guru Jim Mackonochie and technical expert Clive Fort to Mindscape, marketing manager Gary Lewis to Gametek, PR man Andrew Ball to an agency in Cheshire – and the company was now being run by a small team.

Nothing wrong with that except that this select band was preparing to do battle with Sega, Nintendo, 3DO and Philips for a stake in the CD console market.

In July 1993 The Big Breakfast's Chris Evans welcomed invited guests to the Science Museum in London for the gala launch of the Amiga CD32. This 32-bit console was acknowledged – even by Pleasance himself – to be the make-or-break machine for the corporation. It must have been a significant day. Even Medhi Ali turned up.

Bullish predictions of 250,000 sales across Europe by Christmas were made. They were soon exposed as over-ambitious. Overall, Amiga CD32 received a good reception from press and developers. But even the best machines take two or three years to establish themselves. Six months was never going to be enough. And Commodore UK was not helped by slow software support, a

WHERE ARE THEY NOW? – MEDHI ALI

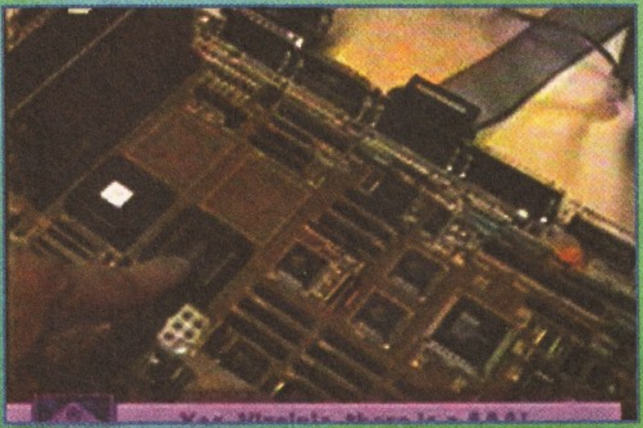
Ali was the president of the company and the man who must take most of the blame for its demise. Hardly a "consensus" manager, he often terrified his staff.

Ali left the company a few days after the liquidators were appointed. He is now said to be unemployed and looking for a job. But he's not short of a few bob.



Medhi Ali (at the centre of the picture) flew over from the US especially for the UK launch of the CD32.

The AAA chipset (right - a still from Dave Haynie's "Deathbed Vigil" video) was planned as the core of the next generation of Amigas. With a pretty awesome specification (including eight channels of CD-quality sound), this new chipset held out great promise. However, the liquidation of Commodore left it limbo...



WHERE ARE THEY NOW? – AAA CHIPSET

Whether the AAA chipset ever sees the light of day depends on the speed with which it can be developed.

David Pleasance says it was 98 per cent complete when liquidation was announced.

However, no operating software had been designed for it and now, of course, there are no software specialists working for the company.

RISC technology, which could produce a machine which combines Amiga, PC and Mac operating systems is just 18 months away.

So if a AAA chipset machine could be brought to market in, say, six months it would be a viable proposition.

If not (as seems likely) the RISC machine will take priority.

relatively meagre advertising budget and a TV ad which was panned by the trade as dreary and old-fashioned next to Pirate TV and Rik Mayall walking into a pane of glass.

In the circumstances actual sales of around 50,000 in the UK by Christmas 1993 (Commodore has never given a precise sales figure) were very good. Excellent even. And software sales began to climb too. By easter 1994 CD32 games were easily outselling PC CD-ROM and Mega CD titles. In general it was a good performance. Just not good enough to bail out a company that had posted a series of staggering quarterly losses.

These numbers make pretty frightening reading so those of you of a nervous disposition be warned. For the three months to March 1993 the loss was $177.6 million – that's roughly six times the profits for the previous fiscal year. This huge total was the third instalment of a year in which Commodore made a total loss of $356.5 million. The mistakes of the previous four years had been swallowed and kept down for as long as possible. Now they were being vomited up at the same time.

So you get a feel for the scale of the job facing the company. Pleasance and Proudfoot put a pair of brave faces on the task and said that, yes, the loss was fearsome but it was because all the expensive mistakes had been written off in one go. "Some things have to get worse before they get better" was how Pleasance put it. They were confident that the new streamlined Commodore with a manageable core range comprising the A1200, CD32 and A4000 could muscle it through. And this was the case that Commodore presented to impatient creditors like the Prudential with mounting debts. It worked. The company was given a stay of execution and some breathing space to put things right.

In the three months to December 31 1993, when the CD32 factor was supposed to be taking effect, a loss of $8.2 million was posted. Chairman Irving Gould had injected $17.4 million into Commodore as a loan from another of his companies. Clearly the rescue plan was too little too late. Liquidation became inevitable.

> **"There were occasions when Commodore was not in a position to take advantage of its fantastic technological headstart."**

When it came, it was like a bolt out of the blue to all but senior management. In the UK staff at Maidenhead were shocked. But the company continued to trade as normal as did subsidiaries in Canada, Germany, Scandinavia and Italy, sheltered by the court protection of their parent in the Bahamas.

As potential backers jostled for control it seemed the future would be sorted out quickly. But the lawyers tasked with finding a solution had underestimated the complexity of the job. The Commodore organisation was a tangled web – it has even been likened to the Maxwell corporation. A buyer was not going to be appointed quickly.

This gave Commodore UK time to put together its own bid. On July 7 1994 it was announced to the trade. At this point Pleasance talked about the possible replenishment of Amiga stocks by October/November. Of course, we now know that has not happened. The Commodore UK boss is still confident his bid will be accepted. He says there is no substance in the CEI offer whatsoever and that it wouldn't make sense for the liquidators to simply dismantle Commodore. Why? Because Amigas are no good to anybody unless somebody controls and regenerates the technology.

Which brings us back to the beginning. Of the feature, that is. Is this the beginning of the end or the end of the beginning? AS

In my opinion...

Errol Madoo works for E M Computergraphic, one of the formost purveyors of PD and Compugraphic fonts in the Amiga world. As with all the others in this piece, he has his own opinions as to why Commodore went into liquidation...

1. In my opinion the Commodore of old spent far too much time and effort trying to be all things to all people. They really should have ploughed more money and development time into concentration on the Amiga (subsidised by their sales of the games Amigas).

Their PC clones were a joke, doomed from the start, and aimed at an extremely competitive, and low profit, market. Commodore were the only company that could make and develop Amigas. This, coupled with a more positive form of Amiga promotion could have guaranteed them a solid future.

2. The new owners, whoever they will be, should really concentrate on publishing the Amiga as a professional, very competitive DTV machine. The Amiga, as we all know, is a great multimedia machine, capable of matching the capabilities of the best contenders in this field at a much lower price.

3. I've got no favourites here, as long as the new owners see the Amiga for what it is, for what is can do and, maybe more importantly,. are prepared to market the machine to a professional market.

4. Support at this stage isn't really the problem for the new owners. I feel that they should talk to high end users and organisations, the people that *use* Amigas and find out what these users want from the Amiga.

The new owners should then develop Amigas around the people that know what the hell they want from the machine. Maybe consulting with third party developers would also give them a more integrated and detailed plan for future developments.

5. At present I see a very grim future. In the space of a few short months I have personally seen the Amiga loose a staggering amount of ground with professional users. Even if the Amiga saga was resolved today, the new owners would be facing a long struggle to make up the lost ground with the professional users that are transferring to alternative (and very expensive) computer platforms at an alarming rate. Their first priorities should be to get machines to the end user, get the Amiga as much exposure as possible and, more importantly, get feedback from the (remaining) high end users.

On Tuesday 7t something big *the* Amiga ma

Britain's best-selling magazine for creative Amiga users gets a brand new look...* Along with two disks packed with complete programs, unmissable utilities and exclusive demos of the latest Amiga releases.



* PS But we still don't do games – we'll leave that to Amiga Format and Amiga Power, OK?



PIZAZ - OR IS IT PIZZA?

Gary Whiteley finds a new video titling contender to be a plain affair, rather than the Quattro Stagioni it would like to pretend it is.

You have to be either very confident or very stupid to claim that your program is "The Ultimate Video Titling System", but as this is what Video FX claim for their new program I was keen to put it to the test and see just what it was they had to trumpet about.

I have used a good few titling packages over the years, including all the commercial offerings and several PD efforts and was curious to know how Pizaz would measure up to such competition.

Supplied on 11 disks, Pizaz claims to work on any Amiga fitted with at least 3Mb RAM (including 1Mb Chip RAM). A hard drive isn't essential as Pizaz works directly from floppies, but it is recommended, as is 5-8Mb RAM. Incidentally, a full HD installation of Pizaz requires just over 4Mb of free disk space! So, anticipating the good things to come I started the HD installation (which uses the standard Installer system) and, ten minutes later, all the software was installed.

Once Pizaz was running I began to do my usual investigations trying to freeze it, trying to push it to its limits... Often I'm amazed by what a really smart program can do and I write all the good things down first but with Pizaz it took under an hour of use to produce a list of shortcomings which filled most of an A4 page!

NOT ENOUGH MEAT?

1 Pizaz only works in lo-res overscan (368 x 285 x 32 colours);
2 Pizaz only has three fonts (and no choice of point sizes or lower-case letters);
3 Pizaz cannot use standard Amiga fonts (a separate program, costing £39.99, to do this is due out in January 1995);
4 Pizaz doesn't centre text properly (see screenshot top right);
5 Text kerning is poor;
6 You can't mix fonts on a page;
7 Change the fonts and you lose all the text on a page;
8 Pizaz cannot import text files;
9 Pizaz doesn't do scrolls or crawls in the accepted sense of the word (such rolling a credit list up the screen);
10 No wipe effects are available;
11 Pizaz cannot load an IFF file as background, nor can it use brushes;
12 Pizaz has no real palette control;
13 Horizontal "scrolling" is often jerky;

True, most of the above problems can also be individually applied to some (if not all) of the video titling programs which are (or have been) available for the Amiga, but not in such concentration as seen here. I question whether Video FX stopped to consider the market they were moving into, if they took a close look at the competition, or if they even know what a video titler is supposed to do?

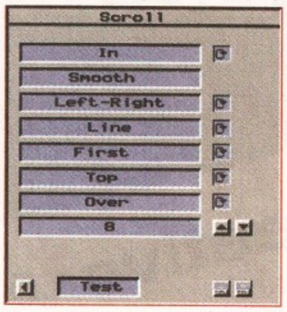


Would you use fonts like these for video titling? No, neither would I, even if Pizaz did provide lower-case letters – which it doesn't.

NO NEED TO WELSH ON BASICS

There's more: Video FX have not only added personalised security coding to each issued program (not that I think that's a bad thing) but they have also included that: enter word two from line two of paragraph four on page 42-type of annoying requester that sometimes pops up. I know Mid-Glamorgan is a bit off the beaten track, but surely there's no time warp there?

If you're reading, Video FX, I hate to have to say this, especially since you undoubtedly have a lot at stake here, and you have put more than 20,000 lines of code into making Pizaz what it is, but this program *just doesn't cut it!*



Pizaz's menus, such as this for "scrolling" are simple.

Whatever inspired you to include only three fonts (OK, they can do some fancy rotating things) that look like escapees from an old Euro-Demo? Why no plain fonts, and why no choice of point sizes or lower- and upper-case letters.

Must we always spell words in multi-coloured, chrome-effect text? Do the TV companies want this? Do wedding producers want this? Does your average DTV enthusiast want this? I think not!

So I suggest that you include some more usable and realistic fonts immediately. Perhaps you could start with some serif and non-serif fonts, each in three point sizes (perhaps 16, 24 and 32 pixels high, for instance). And then add the ability to mix them on a page and adjust the colours of each at will. If you don't know what I'm talking about check out some other video titlers.

NOTHING IN ITS F(L)AVOUR?

OK, Pizaz has a few redeeming points, though these are obviously heavily outweighed by the above criticisms. The rotating text idea is nice (where text grows while spinning into place, either by the letter, line or word), and the so-called scrolling routines look good where text rolls either above or below its preceding line. I also liked the fact that there are several ways of adding spice to the text by being able to adjust (or add) things like outlines, borders and so on, as well as make limited adjustments to the colour palette (by loading one of several preset palettes).

Beyond this, though, there's not much left to say. An exclusively lo-res interface and lo-res operation isn't up to scratch nowadays. It is no excuse saying that lo-res was used to save memory and enable Pizaz to be as compatible with as many Amigas as possible because, to come up to Pizaz's stated minimum RAM requirements, any



This is what Pizaz refers to as text centring. Surely a visit to the optician is required here if you think that the 'ON' is really centred?

standard Amiga (except the 4000) would have to be expanded anyway. Heck, if BAS 2 can scroll and crawl in Hi-Res in just a Mb and provide more than twice the fonts and most of the features of Pizaz then surely Pizaz could get it's act together in 20,000 lines of code? Get real, Video FX! AS

Gary Whiteley can be e-mailed as drgaz@cix.compulink.co.uk

WHAT
Pizaz v1.1 – £59.99
WHO
Video FX
WHERE
Video FX, 291 High Street, Gilfach Goch, Mid-Glamorgan, CF39 8SH ☎ 0443 674385.

CHECKOUT
Pizaz

Documentation: 75%
Adequate – but boring.

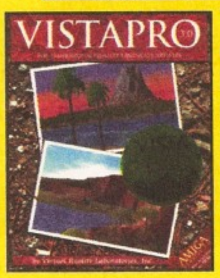
Features: 40%
Naff. Not enough fonts, not enough features.

Ease Of Use: 50%
Simple enough to use, just that there are things that ought to work better – like font swapping.

Value For Money: 30%
If this was £10 shareware then I might be happy. OK, it isn't Scala, but even so...

Overall rating: 50%
Despite its grandiose claims, Pizaz really isn't worth spending your money on. Buy BAS 2 instead and some real pizza with the £30 you'll save – you'll certainly enjoy it more.

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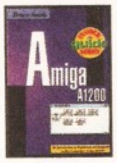
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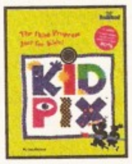
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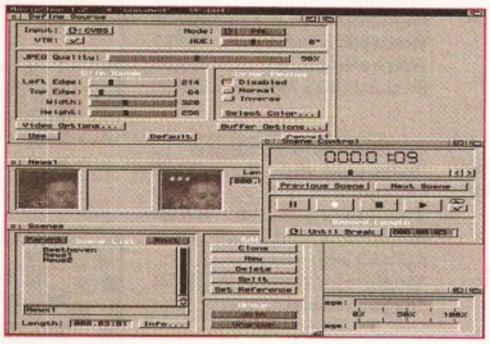
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VLAB MOTION

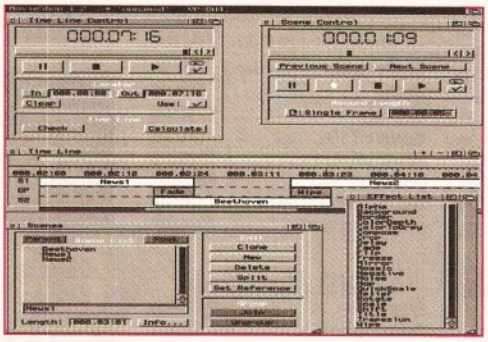
Gary Whiteley reviews a new motion JPEG card and wonders whether it might provide some serious competition for DPS's PAR card.

Like its rivals, the DPS Personal Animation Recorder and the Digital Broadcaster 32, MacroSystem's VLab Motion has taken rather longer than expected to get out of the labs and into the shops. But it's here now and, bearing the competition in mind, I set about giving it a thorough testing.

The most obvious difference between the three systems is price. A full PAR, with grab module and an adequate hard drive costs around £3500, whilst a fully-specced DBC 32 setup costs even more. The VLab Motion, together with a large, fast, dedicated hard drive and SCSI card should cost well under £2500. I know there is more to comparisons than price, but over £1000 difference between apparently equivalent PAR and VLab Motion setups is a pretty big chunk of cash and this alone will be an obvious attractor to potential punters. If space allows we'll come back to this point later. First let's find out just what the VLab Motion is.



Configuring VLab Motion's interface is a necessity unless you have a 1280 x 1084 display.

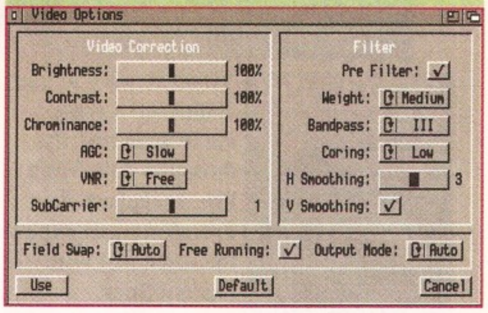


Here are separate setups for grabbing and editing.

VLab Motion is a motion JPEG (not to be confused with MPEG) card for any Zorro slot equipped Amiga. It can accept composite or YC video and convert it on the fly at 50 fields per second into digital video stored on a hard drive for further manipulation or for output as sequences of single images or as animation to tape. VLab Motion comes supplied with MacroSystem's MovieShop software, which controls all the various aspects of the digitising and manipulation processes. Used in conjunction with MacroSystem's Toccata sound card MovieShop can also control simultaneous audio digitising and synchronous sound and picture editing. However, this review is based solely on the VLab Motion, as I wasn't supplied with a Toccata card to play with as well.

Fitting the VLab Motion card is straightforward (but see the sidebar for hints on what could go wrong if your system doesn't measure up to VLab Motion's non-specific requirements) and installing the software is no problem. One important point is that any hard drive (or indeed drive partition) which you designate for saving VLab Motion JPEG files will no longer be accessible to normal AmigaDOS functions, as it will be taken over by MovieShop for its own purposes, therefore becoming useful only for VLab Motion work.

You should also note that grabbing big chunks of high-quality video data requires huge amounts of disk space, so if you're seriously considering VLab Motion I'd recommend that you have at least a half Gb drive. It is crucial that the drive is as fast as possible and SCSI-2 might be preferable to provide a data transfer rate high enough for true broadcast-quality storage and playback. Unlike the PAR, which requires a dedicated IDE drive connected directly to its own interface, the VLab Motion will work with any SCSI drive (and probably even with a suitably fast IDE drive).



Along with all the bells and whistles, VLab Motion also has proc amp video controls to tweak the



Could the V-Lab Motion turn you into a Rock'n'Roll rebel? Or just a pale imitiation?

In addition to its grabbing, editing and image and scene manipulation functions the Movieshop software provides for extensive control over the incoming video signal, particularly colour, contrast and brightness, as well as a range of filtering options, in case the picture quality isn't quite up to scratch. There are also controls for colour-keying a live video image over a previously digitised one, though keying quality is dependent upon the quality of both the digitised and incoming signals. It works, but it could be better.

Once digitised, the video clips ('Scenes') can be hacked around in various ways, including being built into longer sequences with optional transition

REVIEWER'S LIFE IS NOT A HAPPY ONE!

In my three years with Amiga Shopper I don't remember having had so much trouble with a product as I had with VLab Motion.

Having read MacroSystem's minimum hardware requirements it looked like my 40MHz '030-equipped, 12Mb, three 120Mb SCSI hard drives A2000 would easily make the grade. Alas no, because once I'd got the VLab Motion installed, the only consistent features were the problems I had getting it to work.

Thinking it might be a memory problem or hardware conflict, I started removing cards to test this theory. The problem persisted. To eliminate the possibility that it was a problem with my GVP accelerator/SCSI card, I tried the VLab Motion in a friend's A2000 with an 040 card. Still no dice. The best JPEG quality I could use with confidence was just 30% – not even VHS quality!

By now I'd called ACS several times. Meanwhile, I became increasingly frustrated with the VLab Motion. Now I suspected the hard drive I was using, but was assured that it was fast enough.

ACS told me that MacroSystem in Germany had found no incompatibility with GVP cards, though Noahji's (MacroSystem's US distributors) had apparently circulated a note saying that there *were* compatibility problems with the VLab and GVP Series II SCSI controllers. I fitted an Oktagon SCSI controller to substitute for the GVP, which meant having to disassemble my Amiga to shift the hard drives around. But having rebuilt my Amiga, guess what? Yep, still no improvement! I began to wonder if the VLab Motion card was faulty.

Another call to ACS informed me that of a batch of twelve cards, six had already been returned as faulty. A new VLab Motion card from a new batch was duly dispatched to me, the third in as many weeks.

After swapping my hard drives around, guess what? *It worked!* So the drive distributors had been telling porkies and my Conner drive wasn't as fast as they said it was, which is why the swapped-out Quantum was now letting the VLab Motion work with some semblance of realism, and, additionally, my GVP SCSI/accelerator worked fine.



The image quality of the V-Lab Motion depends upon what compression you use.

effects between them. The heart of the editing process is a drag-'n'-drop time line window which is reasonably easy (though not particularly intuitive) to use but the calculation of the effects can take a very long time. The effects are not real time and must be calculated and stored frame by frame before the new sequence can be replayed.

A range of effects is provided, including basic wipes and fades, several image processing functions, picture-in-picture processing (with borders) and simple titling. Scenes can easily be joined together by grouping them in the clipboard window but trimming them to precise lengths isn't as easy as it should be. Grabbed scenes and edited sequences ('Movies') can be saved to other hard drives, but unless you note the JPEG ratio they were made at you won't be able to reload them!

MovieShop has plenty of potentially excellent features, not least its ability to import both JPEG and standard IFF files, and to export frames of video data to disk in a variety of formats. This means that animations can be built to the hard drive from sets of IFF or JPEG images, or sequences of video can be split into single frames for rotoscoping or other processing.

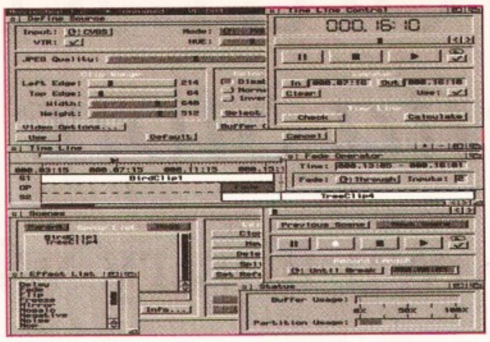
BUGS AND TROUBLES

Throughout my evaluation I came across software bugs and other problems. Here are some of the most prevalent or niggling:

- Scenes can be saved as data to other devices than the MovieShop partition/drive but unless you know their JPEG ratio they can't be reloaded into MovieShop! So, make notes or effectively lose your data!
- Any changes to the digitising settings will result in the total loss of all the data saved on the MovieShop drive. So, back it up first (taking into account the above paragraph).



A special prize will be offered to the person sending in the wittiest caption to this picture...



This is what happens if you don't configure the screens – a lot of clutter!



Will you want to kiss the V-Lab motion? Not unless you have a fast machine and hard disk...

- Top quality grabbing at full PAL overscan requires a very powerful Amiga system – more powerful than mine, certainly. I wasn't able to get better than 75% JPEG at 640 x 512 pixels, though I would have liked to grab at 752 x 576 at 90% or more...
- Effects transitions can take ages to calculate (as can loading or saving out frames from a sequence) though the effects *are* built-in and so don't require the use of an external processor such as ADPro or ImageFX.
- The software seemed quite buggy at times and would hang unaccountably or refuse to function as expected, even though it had worked 'perfectly' just moments before. Functions often seemed inconsistent for no apparent reason.
- Setting up the necessary buffer values for disk load and save can be a real pain and requires a lot of experimentation to achieve optimum performance for each VLab Motion system.
- Constructing a VLab Motion animation from external image sequences (for example rendered images from a 3D program) is another hit-and-miss affair where it seems easier to get error messages than to actually build the animation.
- There are too many different control windows, making for a cluttered user interface unless different settings are used or the user has access to extremely hi-res screen modes.

WHAT'S MISSING?

I was surprised that VLab Motion has no playback speed control or time-lapse grab facility (although it can grab either single frames or specified numbers of frames in one pass), and I'd like to see several of the windows combined for simplicity – such as the Time Line and Time Line Control windows. Another bug sweep is essential and the manual needs significant improvement.

Gary Whiteley can be e-mailed as drgaz@cix.compulink.co.uk. AS

REQUIREMENTS

Although the manual says any Amiga 2000, 3000 or 4000 with at least 2Mb of Fast RAM and a free hard disk partition or entire drive are the minimum requirements for successful VLab Motion use I have to say that most users will probably be very disappointed at this level.

For realistic results an '030 (or preferably '040) accelerator, plus large, *fast* SCSI Hard Drive (12 msecs or better) and 8Mb or more RAM are essential. Also required – composite or YC video source, external video monitor and a second VTR for recording the VLab Motion's output.

WHAT
VLab Motion – £1040
WHO
MacroSystem
WHERE
Amiga Centre Scotland, Harlequin House, Walkerburn, Peeblesshire, Scotland.
☎ 0896 870583.

CHECKOUT
VLab Motion

Documentation: 70%
Looks convincingly authoritative but is very frustrating to read (no index) and rather uninformative to boot. Lack of tutorials, poor explanations of crucial software settings and hardware requirements and dodgy English don't help. By the way, 41 pages of the manual's 100 are devoted exclusively to ARexx commands!

Ease Of Use: 50%
Thanks to the indifferent manual and cluttered, schizophrenic, multi-window user interface VLab Motion verges on being a pain to use at times – unless you have a 1280 x 1024 hi-res screen, that is.

Features: 85%
There's no doubting that MacroSystem have tried to cram as many features as possible into their package, though they aren't all quite up to scratch yet.

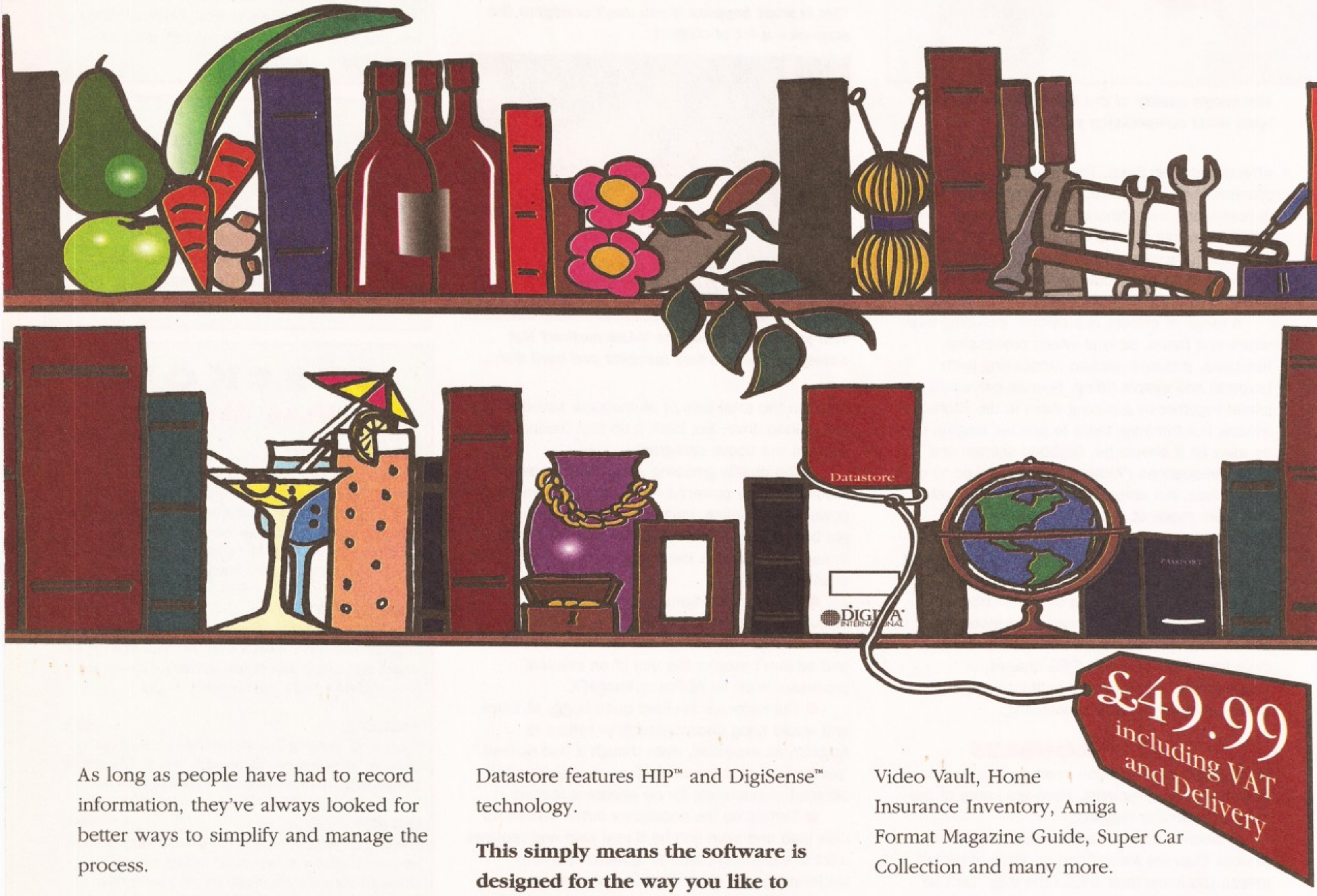
Quality: 70%
From my (limited) tests I don't think the VLab Motion has yet reached true broadcast quality, though this obviously depends very much on the specification of the host Amiga and its hard drives.

Price: 80%
Well priced and featured against the competition, but still early days as far as quality and software stability goes.

Overall rating: 71%
Cheaper than the DPS PAR by a good stretch, but nowhere near as friendly or efficient to use. Quality isn't as good, though the added editing and effects, coupled with audio compatibility, are points in its favour. I'd wait a while for VLab Motion (and its technical support) to improve before splashing out. I'm afraid VLab Motion didn't knock my socks off, but I'll watch its progress with interest.

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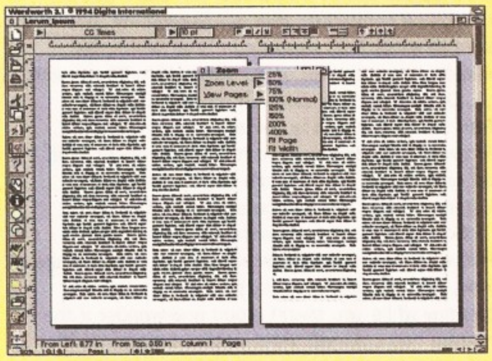
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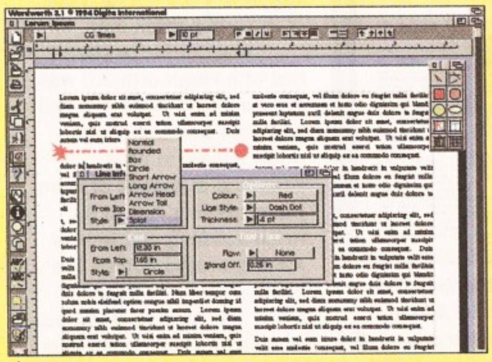


Third time lucky?

Jeff Walker is a veteran! He has braved every version of Wordworth. Now he's back for more.



Wordworth 3.1 offers 10 preset levels of magnification together with the facility to magnify to any level between 25% and 400% in 1% steps. Here, two pages fit side by side neatly at 50% on a DBLPAL 720 x 550 screen.



Wordworth 3.1 also contains several internal drawing tools. You can choose from several shapes including rectangles and ellipses, and define the colour, weight and style. You can also draw lines in a number of styles and give them a variety of different start and end designs, for example, dimensions – arrows pointing at a vertical line – and, as above, splats!

Regular readers will know that I laid into the first release of Wordworth 3 rather heavily (issues 37 and 39). It was a tad buggy to say the least. It was also slow, and lacking in the kind of features Amiga owners are coming to expect of top-priced software. Release 3.1, says Digita, is faster, friendlier, and even more powerful. So let's see exactly how much faster, friendlier and more powerful it is.

We'll deal with "even more powerful" first because that implies that there are new features, as indeed there are. And top of the list is landscape printing, which was a feature of version 2 but was removed for the 3.0 release because it didn't actually work. Landscape printing is one of those basic functions you expect from a word processor these days, so it hardly counts as a powerful new feature in my book. However, the good news is that landscape printing does now work, so you can produce, among other things, side-by-side A5 pages on A4 sheets of paper.

EPS-PECIALLY FOR 3.1

One of the biggest complaints I had of version 3.0x was that it wasn't able to import any sensible vector drawing format, only a couple of obscure Atari ST and PC formats. New to 3.1 is support for Encapsulated PostScript (EPS) drawings. Digita has copied its greatest rival, SoftWood's Final Writer, by utilising a version of Adrian Aylward's freely distributable post.library to import and interpret PostScript code. Imported EPS drawings can be printed to any type of printer, although you require a deal of RAM for this (at least 3Mb), and interpreting PostScript is a big job so don't expect it to happen anywhere near quickly.

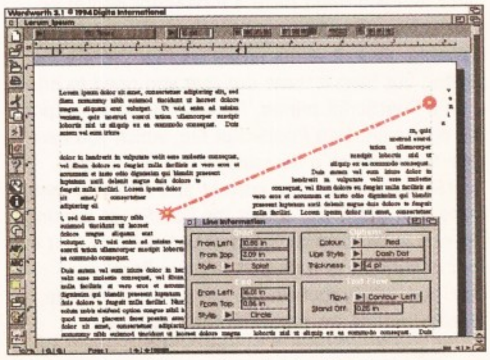
Once imported and interpreted, EPS drawings are displayed on screen quite quickly because you don't see the real thing, just a rough bitmap version. When you scale an EPS drawing it may appear quite jaggy on screen. To draw it properly would take an age. But the on-screen rough is good enough to work with and the printout perfect – just as you would expect any vector drawing to be.

One other important point here. As Adrian's post.library is quite a big file and it must reside in the Libs drawer on the disk you boot from, Digita has limited EPS import for use with hard disks only; a sensible decision. Indeed, I think the entire package should be marked "hard disk only" as it is murder to install on to floppy and frustration personified to run from its seven "system" disks, plus however many fonts disks you create.

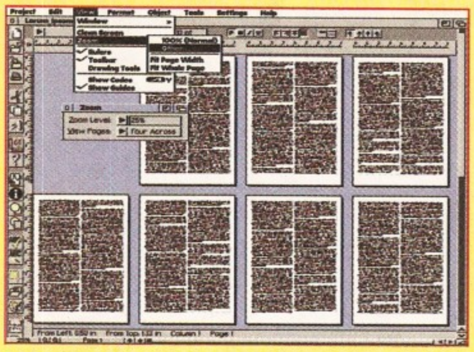
A SLOW SCROLLING

Drag-and-drop text selection came in with version 3.0a. This enables you to highlight a block of text and then drag it to a new position in the document. If it is a long document and the block you want to mark is more than a screenful long, you need to scroll the document while keeping the left button depressed. This kind of scrolling is very slow in almost every word processor, so there needs to be a faster way to mark blocks. The standard technique is shift-clicking. You position the cursor at the start of the block, move the view to the end of the block and then click the left button while holding the Shift key down to highlight all the text from the start position to where you shift-clicked. This technique is supported by Wordworth 3.1, another of its new features.

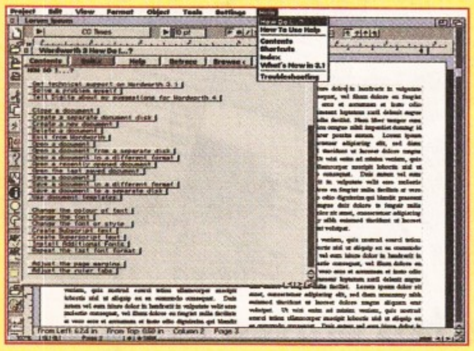
Text formatting has been improved so that typeface and size are independent. This means that you can have multiple typefaces in a selection and change just their size. Digita says that the



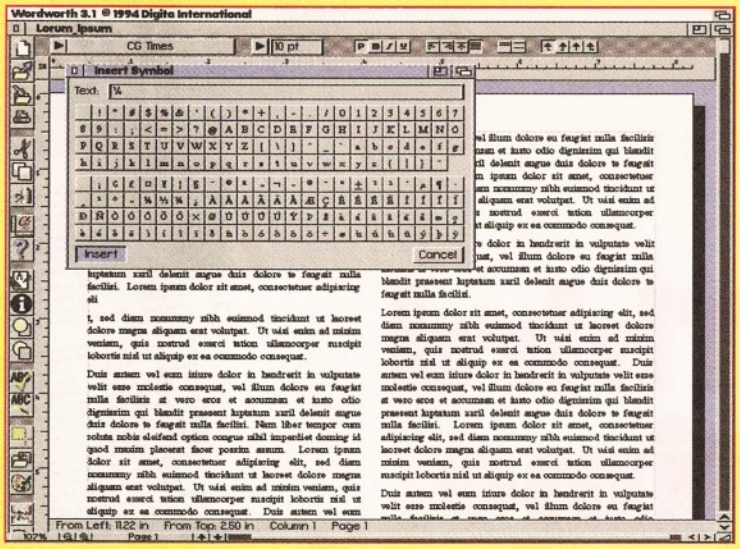
Oh dear: I specify contour left and get contour right and a column of characters (top right in the example) pushed into the non-printable margin.



Wordworth's Four Across mode is dead handy for checking the general layout of your document.



Just about every technical question you could think of asking is dealt with in Wordworth's voluminous on-line help. However, you may not like some of the suggestions for troubleshooting. For example: buy more memory, buy a hard drive...



For those times when you need that funny little symbol in a font, Wordworth reads the entire typeface and displays every symbol. For PostScript Type 1 fonts this assumes Adobe Standard Encoding, so if the font uses another encoding scheme not all the characters are available. This, together with the ability to flow text left and right around the rectangle or contours of a bitmap is on Digita's "list of things to be done" for the next revision.

open/save text filters have also been improved, although my ASCII text import test took just as long with Wordworth 3.1 as it did with 3.0x. The reading and writing of the Wordworth file format itself *has* been improved, so much so that it is no longer compatible with previous revisions of Wordworth 3. Yup, Wordworth 3.0x cannot load Wordworth 3.1 documents, although the new version can export in Wordworth 3.0x format.

PostScript printing support came in with version 3.0b, but I'll mention it because it was missing when I reviewed 3.0. It is pretty basic:

- colour and Greyscale output are supported, and you can output to printer or a named file (but not a named device);
- you can set horizontal and vertical offsets and scale and rotate the output;
- there are no crop marks,
- there are no colour separations;
- you have no control over the size of halftone screen unless you edit the PostScript prologue file;
- you have no control over the output page size.
- it does download PostScript fonts and you have the choice of Every Time, Once Only, or Never (because the fonts are resident in the printer).

IN IT'S FONT OF WISDOM...

But, and yes, it is a big but, there is a problem. Imagine this scenario. You have laid out your document using several PostScript Type 1 scalable fonts, but you don't have a PostScript printer so you (quite naturally) have the Normal print method selected. Fine, it prints nicely on your preferences printer, but then it turns out that you need to print it on a PostScript printer. So you decide to output the document to a PostScript file, which you can then transport to a new site and dump to the PostScript printer – the correct and sensible thing to do. But when you select the PostScript printing method in Wordworth 3.1 it changes every font in your document to a default internal PostScript font. Yes, every font and to the same point size, thereby ruining the layout of the document.

To get Wordworth 3 to use and/or download PostScript fonts you must have the PostScript print method selected, before you start selecting fonts and formatting your pages, that is. But if you do that, when you want to print using the Normal (standard Amiga printer preferences) method, Wordworth 3.1 changes all the fonts to a default "normal" font. Yes, every font, and all to the same point size, so ruining the layout of the document.

TWICE ISN'T TWICE AS NICE

This is so crazy I can hardly believe it, but it is true. In Wordworth 3.1 (and 3.0b) you have to layout the document twice – once for Normal printer output, and again for PostScript output!

As far as new features are concerned, that's all of them – hardly what you envisage when you read "even more powerful" as most of them are features that were missing from, or badly implemented in previous revisions of Wordworth 3.

As for "friendlier", this refers to the on-line help files, which are indeed most welcome and include many tutorials. Although these are almost entirely of the "how do I do one single thing?" type, to which the answer is almost always "select this menu item, then that gadget", or something similar, it is this on-line help that makes learning to use Wordworth a pleasure because it is aimed at such a low level of expertise.

Is it faster? Loading and saving are quicker in the Wordworth document format, and find/replace has been turbocharged beyond recognition. A test that took 290 seconds in Wordworth 3.0 took 11 seconds in Wordworth 3.1, which is five times faster than Final Writer Release 2 can manage the same thing, and an incredible achievement for a graphics-based word processor. Oh, that this enhanced performance had been reproduced for document formatting!

Digita says it is faster, and the tests I performed showed that this is, in fact, no fraudulent claim. But it is not fast. In fact, "slow" would be the word I would use. (Unless I was an advertising copywriter, that is.) Something that takes three or four seconds in Final Writer, for example, can take 30 or 40 seconds in Wordworth 3.1. Or even longer. Even on an A4000/040 I often sat and stared at the stopwatch while Wordworth 3.1 had a good hard think about what I had asked it to do – change page sizes or margins, global change fonts, and so on.

Sometimes, while working on something, Wordworth 3.1 suddenly wipes the on-screen page clean, leaving just the busy pointer to keep you company while you sweat blood and wonder if the program has crashed. Rest assured it hasn't, it's just working, you know, like builders work when you're not around to keep an eye on them. In fact, at one point I wasn't sure if the smoke coming out of my A4000 was the CPU chip overheating or Wordworth 3.1 having a cup of tea and a quick drag.



Scalable Encapsulated PostScript (EPS) graphics are now supported by Adrian Aylward's post.library. You need a hard disk and at least 3Mb of RAM to import EPS graphics into Wordworth. (Note that this graphic has left and *right contour text flow despite Wordworth allowing me to choose only between left* or *right text flow.)*

Another big problem I had with Wordworth 3.0 was the number of bugs in it that caused it to crash. Digita would appear to have squashed almost all of them. The disastrous bug in 3.0 which suddenly and without warning wrecks layouts has not yet reared its head for me in 3.1. My only crash was on quitting the program after attempting to import some incompatible graphics file formats. Silly me.

The text flow system still has some bugs, however. The old bug that forces a column of single characters into the non-printable margin is still there, but this can be worked around once you know what not to do. And you still can't select an "exclude" text flow mode, left *and* right text flow, in other words, which would be especially useful in the double-page spread layout.

Contour text flow is also erratic: sometimes

when I chose contour left, I got contour right. On the whole, unless you really need text flow, try using extra carriage returns in the text to make spaces into which you can drop your pictures.

TO BE TRUE TO TRUETYPE

Font support hasn't changed from 3.0, but I must point out a fact I missed in my review of 3.0 – to use TrueType fonts you require a 68020 CPU or better. I imagine most of you use Compugraphic or PostScript Type 1 fonts anyway.

All of the other problems I had with version 3.0 are still problems with 3.1 because they are part and parcel of the program's design. For example, cut/copy/paste doesn't use the standard Amiga clipboard, so data cannot be quickly moved from Wordworth to another application, or vice versa. This may sound trivial but I think that standard clipboard support is an important aid to productivity.

The same goes for ARexx support (recordable macros, in other words), which Wordworth lacks, and proper master pages and style sheets. These are features that people who use a word processor every day have come to expect.

There is, at least, the Librarian (which used to be called the Glossary) so that you can quickly insert frequently-typed words and phrases, and the Auto-Correct feature is godsend for clumsy typists loke mw.



These pictures have different palettes but Wordworth chose acceptable colours for the right-hand picture from the left-hand shot's palette. No matter how they look on-screen – both use the original palettes to print.

Wordworth's bitmapped graphics support is fairly comprehensive. It imports any palette-based (2-256 colour) IFF-ILBM, BMP, PCX, TIFF, IMG and GIF, plus HAM and HAM-8 pictures and can all be displayed on-screen in 2-256 colours. No matter how many colours your current screen mode supports, Wordworth prints pictures using their original palettes, so while a 256-colour picture looks odd on an eight-colour screen, it prints fine.

In 256-colour mode Wordworth remaps its internal palette to the colours of the first bitmap you load; subsequent bitmaps get remapped for screen display to use the closest colours from this first palette, but again all bitmaps print using their original colours not those you see on the screen.

By default Wordworth automatically preserves the aspect ratio of bitmaps when resizing them, saving you the bother of having to hold down a qualifier key. Because in this mode the bitmap doesn't always fit inside its bounding box exactly, it can be awkward positioning a bitmap accurately because all you see when you resize or drag the box is the outline, which is often wider than the actual picture. An "adjust box to correct width for aspect" feature would be useful. If aspect ratio isn't important, or if you want to change the aspect, you can switch this feature off so that the bitmap always exactly fills its bounding box.



You can save pictures as part of the document or leave them on disk with a link to them in the document. The hot-link is there for multi-taskers. This means that a graphic re-imports itself into Wordworth, automatically, if you load it into a paint program, edit it and then re-save it.

GO WITH THE TEXT FLOW

You can make colour 0 of bitmaps transparent, and so you can get text to flow around the contours of a detail in a picture. This is simple for standard two-colour clip art (provided colour one is the actual detail). But for bitmaps that contain more colours you may need to first remap their palettes in a paint program so that colour 0 is white and then "white out" the areas of the bitmap you want to be transparent in Wordworth.

Naturally, Wordworth can flow text around the rectangle of a bitmap as well as the contours, but your choices are flow left or flow right – not both at the same time. Digita says this is on the wish list for the next revision.

Wordworth contains a few internal drawing tools, including rectangles, ellipses and rounded boxes, filled or unfilled, and outlined in any weight and colour of line in different styles. You can draw straight lines in any colour, weight and style, and with different start and end designs such as arrowheads, squares, circles and the ever popular splat.

Text Effects are also popular. You can type in text and then apply any number of effects that repeat that text, twisting it and spinning it and distorting it and changing its colour. The results are certainly eye-catching but are they much use?

More useful is the tables feature. A table is like a mini spreadsheet. It is rectangular and it has "cells" into which you can type text or numbers. You can perform some simple calculations on the rows and columns of tables and the results are automatically inserted into the tables. You have control over the size of the grid and the size of the cells, and the colour, weight and style of the grid lines. Tables are independent objects, like pictures, so you can move them around without destroying the layout of the table.

However, these tables would be more useful if there was an option to create charts from the data that has been entered, and if you could import data into them (from a spreadsheet, for example), and if you could export tables so they could be imported into other Wordworth documents.

You may also have independent text objects, separate boxes of text which can be freely moved around a document, which is useful for captions and headings and all sorts. Again, you cannot import text into these boxes, but you can cut/copy text from a document into them.

These "special" features are what sell the program, along with its greatest asset of all — its look. While I have been testing Wordworth 3.1 several people have walked into my office and said: "Ooo, that's cute!" As soon as you see Wordworth you can't help wanting to use it. This "feature" is probably the main reason for Wordworth's success, which illustrates just how important appearances are. OK, your mother told you never to judge a book by its cover, but then she never had to stare at an ugly user interface all day long and Wordworth definitely has a very high, what I call, 'wow!' factor.

DO APPEARANCES MATTER?

However, whether a pleasant and friendly user interface can make up for a lack of speed and features or not is a moot point. However, if Digita's sales figures are to be believed, in the case of Wordworth, it would appear that it does, and who am I to argue with public opinion? AS

WHAT
Wordworth 3.1
SRP is £149.99 but it's selling for much less. Upgrade from 3.0x £14.99. Trade-in for any WP £59
WHO
Digita International Ltd
WHERE
Black Horse House, Exmouth EX8 1JL.
☎ 01395 270273

CHECKOUT
WORDWORTH 3.1

Ease Of Use — 88%
Depends on how beefy your system is, but the on-line help sorts out many of the common problems, although you may discover that you can't do what you want to do because you haven't got enough RAM, or a fast enough CPU, or incompatible Type 1 fonts...

Output — 89%
The addition of PostScript support rounds off Wordworth's printing facilities (see the main text for problems). Don't expect fast preferences printouts of documents that contain vector fonts or graphics, although Digita Print Manager helps you to vastly enhance your output over what the standard Amiga printing preferences can manage.

Performance — 76%
Find/Replace has been dramatically turbocharged, but in general use Wordworth is still very slow compared to the competition.

Documentation — 94%
Superb manual and the 3.1 additions are well documented in the, also superb, on-line help.

Facilities — 87%
It does more than other Amiga word processors, but still lacks facilities found in top word processors on other platforms. SoHo is becoming big business and Amiga word processors are close to missing the boat.

Value for Money — 89%
Terrific value at the £59 trade-in price, but rotten value at the £150 suggested retail price, and, considering the bugs in 3.0, 3.0a and 3.0b, a £15 upgrade fee is scandalous.

Overall rating — 84%
Fine for general, everyday use, but not for a large project because of its lack of formatting speed.

Perfect Word

Chris Bailes examines the special A1200 edition of Digita's acclaimed Wordworth 3.

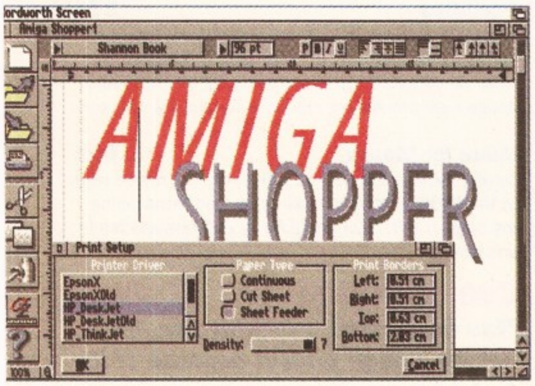
Wordworth is not everyone's idea of a budget word processor because it was aimed at the high-end market. In effect, this left a gaping hole filled only partially by the likes of Protext and Final Writer. Digita have produced a stripped-down version of Wordworth; specifically intended for smaller machines fitted with Workbench 2 or better.

Along with some of the nastier bugs the old version was infamous for, gone have features like the screen saver, footnotes, bookmarks, index, contents and Postscript support. What you're left with is a system that now runs almost comfortably in 2Mb of RAM and a single disk drive. Search & Replace is now running at a claimed 40 times the original 3.0 version. (Not that that was a great feat in itself, the original S&R algorithm was so slow, you could sit through the omnibus version of Coronation Street before the program had leisurely sifted its way through just a few pages.)

With all those features gone, what use is Wordworth going to be now? Well, don't expect to be able to write and format a textbook on it. Wordworth 3.1SE is not about those esoteric uses, it's about writing letters and simple documents where you may still want (or need) to add that little bit of creative flare – posters for charity nights, school discos, or the wallpaper for your den.



Text Effects, in action here, provide a multi-coloured spiral. Note especially how the text remains clear without any ragged edges at the full screen resolution.



Print Setup in Wordworth SE is less cluttered (and less powerful) than its bigger brother.

Lazy typists will be glad to know that the auto-correction facility, DigiSense, has not been shown the door. A strange idea at best, Wordworth does make a reasonable stab at filling in where others left off. Essentially, you keep a library of common blobs and mis-types which Wordworth will correct as you type. "Dorter" for example, could be automatically replaced by "Daughter" without having to resort to the Collins spelling checker.

WHAT ABOUT GRAPHICS?

The first thing you'd have thought would have gone in a limited edition would be Text Effects. So, it comes as something of a surprise to find this module there along with other facilities to draw basic shapes such as lines, circles and boxes. All these facilities are object-oriented which means once and object is drawn, it can be modified, deleted or just moved around with just a flick of the mouse. Each has its own requester so they can be positioned accurately in the document too.

Digita's team decided on a simpler system where the user enters a small string of text and programs the result: adding shadows, colour changes, rotations and so on. The program then applies these and you can view the result without even leaving the requester. Given the complexity of even this system, several pre-set designs have also been included to ease beginners in.

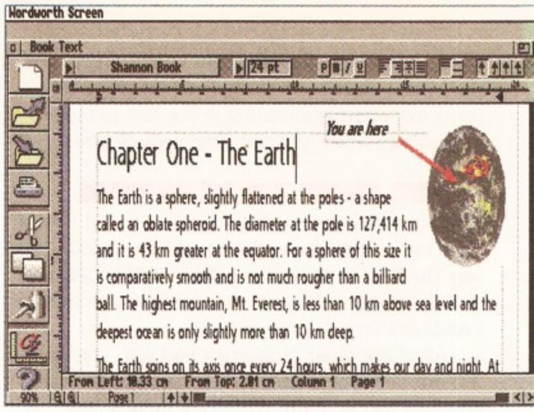
Even Digita admit Text Effects are something of a gimmick, but with a little practice (and used very sparingly) they can be used to great effect.

THE IMPORT-EXPORT TRADE

Graphics and likewise text import facilities have been stripped down to the bare minimum for the SE version. Text can be loaded or save in either Wordworth format or plain ASCII; while graphics can be loaded in plain IFF (with full 256-colour AGA support). The retention of CGM is also important since it affords users access to a huge library of high-quality, fully re-sizeable outline graphics. Digita can supply nearly 600 images on six thematically organised disks from cartoons to dinosaurs – each temptingly priced at just under £15. Similarly, three disks of Agfa fonts are also offered priced between £30 and £70.

Avid fan-club secretaries will be pleased to learn this version also retains the mail merge facility. This means you can create a simple mailing list and send everyone the same letter at the touch of a button. Interestingly, though the SE version supports both ASCII data files and data from Digita's latest database offering, Datastore (which should be available by the time you read this). Such files, usually difficult to manage, can be kept in some semblance of order thanks to the sort facility which can sort a set of paragraphs in ascending or descending date order.

The burning question remains though – how well does it print? Wordworth SE does not support fancy things like Postscript or landscape printing. Those of us with little Epson or Citizen dot-matrix printers will be more than happy with the quality of output and ease of use. Digita even throw in a free



Using graphics with care. Wordworth can annotate diagrams and bitmapped pictures like this one – a 256 colour IFF.

copy of their Print Manager. It will print colour, provided you have a colour printer.

CONCLUSION

There are two deeply divided sides in the word processor war. On one hand you have Wordworth, while the awesome Final Writer stands in the other corner. The sub-£50 market is less well served and Digita are set to make a real killing at this lower price point. Documentation is a too thin on the ground though – even at this price.

Digita have been careful to retain the sort of things you actually need while giving the remainder the heave-ho. It works adequately, if not brilliantly on the A1200. Even so, although it does work on a single drive, that extra drive makes all the difference in the world. AS

WHAT
Wordworth 3.1SE – £49.95
WHO
Digita International Limited,
WHERE
Black Horse House, Exmouth, England, EX8 1JL
☎ 01395 270 273

CHECKOUT WWSE3.1

Features: **80%**
It's not the full version: but some of the more flashy and sought after facilities of the full program remain.

Documentation: **30%**
Just 46 pages trimmed from over 330 and you can't read AmigaGuide in bed!

Performance: **75%**
Still nothing to write home about, especially on the A1200 for which this one is intended but acceptable.

Ease of Use: **82%**
Better than its big brother because the reduction in features make the available ones easier to find.

Value: **87%**
Well worth the money so nip out and get one before the price goes up!

Overall rating: **85%**
The best value word processor currently available on features and price.

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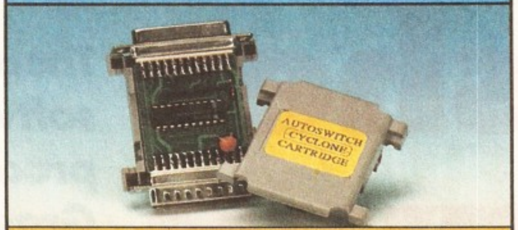


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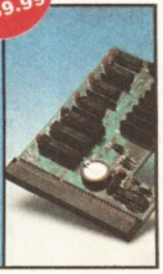
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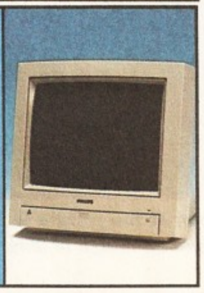
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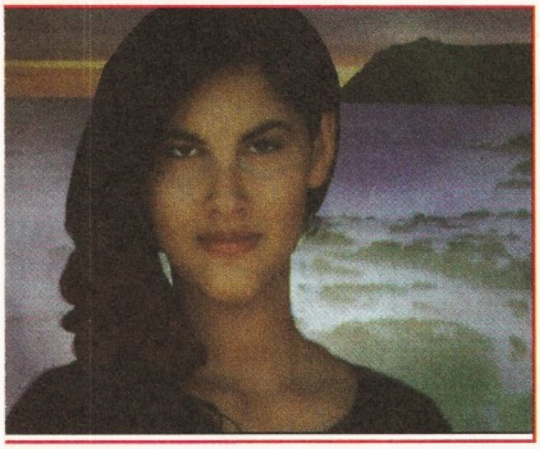
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Paint Brushes at Dawn

There's a new breed of graphical software that combines image processing and painting tools. Graeme Sandiford puts two of them head-to-head.

Buying graphics packages for the Amiga used to be easy. If you were looking for a paint package, you'd buy DPaint; if you were after an image processor, you would buy ADPro. Times have changed and with the arrival of packages like ImageFX and Personal Paint the distinction between these two types of software has become quite blurred. [Groan – Ed].

Yes I know it's a bit of a sad pun, but with the Arrival of Almathera's Photogenics and PPaint 6.1 difference has become even less apparent. Mind you, this is not a bad thing. It means that Amiga pixel-pushers have the chance to have it all – paint packages with enough power to handle image processing tasks.



Here's an example of Photogenic's excellent rubthrough painting mode.

Even though the Amiga has outgunned most other platforms when it comes to graphical applications, Macintosh-users have always been able to fall-back on Photoshop. While neither of the two programs we will be reviewing can compete with PhotoShop in terms of sheer power, they offer similar features. More importantly they do not cost £600. That's why we've put Personal Paint and Photogenics head-to-head – they have similar abilities and fit into the same price range. They also make similar demands of your system – Personal Paint can run a 1Mb machine and Photogenics 2Mb. However, you'll need a 24-bit card or an AGA machine to run Photogenics.

USING WHAT YOU'VE GOT

One thing is true of most types of software – powerful features alone do not make a good program. A program should give the user access to its features in the easiest and most productive manner possible. This is doubly true of graphics programs, where the 'feel' of the package is especially important.

While Personal Paint's and Photogenics' interfaces may be superficially similar, the ideas behind them and their working methods could hardly be more different. Personal Paint takes a fairly traditional paint package approach, while Photogenics has opted for a more avant-garde interface.

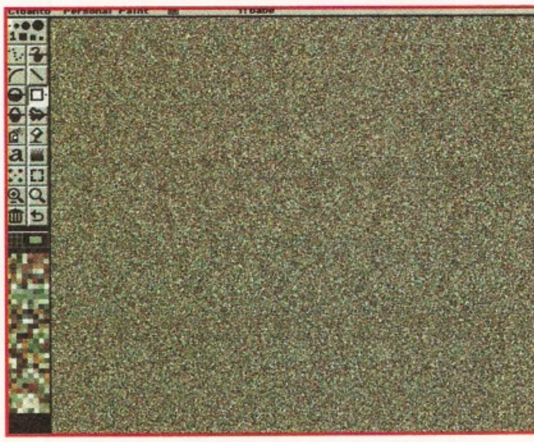
Personal Paint's interface is more than a little similar to DPaint's. If you have been using DPaint then you should encounter no difficulty in switching programs. Along the left of the screen you'll find the palette and a toolbar with icons for each tool. Clicking on an icon with your left button will select that tool, doing the same with the right button give you access to the tools options.

Photogenics looks deceptively similar, but

> ***"Having realistic painting tools is great if you can draw, but they won't transform you into a great freehand artist overnight."***

works, quite frankly, in a most unusual manner. When you apply paint to an area of an image it is actually drawn into a separate paint layer. This layer is placed over the actual image information. In order to make a screen changes permanent you have 'fix' the paint layer. This may sound like an unnecessarily complicated process, but once you get used to it you'll find it's a powerful and flexible way of working.

For example, if you make changes that you find you don't like you can undo areas by simply painting over them while holding the right mouse-

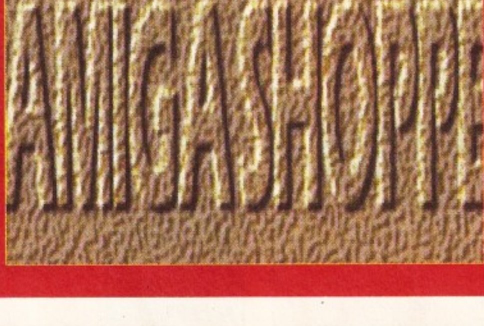


If you look at the picture in the right way you should see an image of lady, or get a headache.

ALPHA CHANNELS

Yes I know they sound like some kind of ray from a 1950's sci-fi film, but alpha channels are an important feature. This image was created very easily and only took about 15 minutes to do in Photogenics.

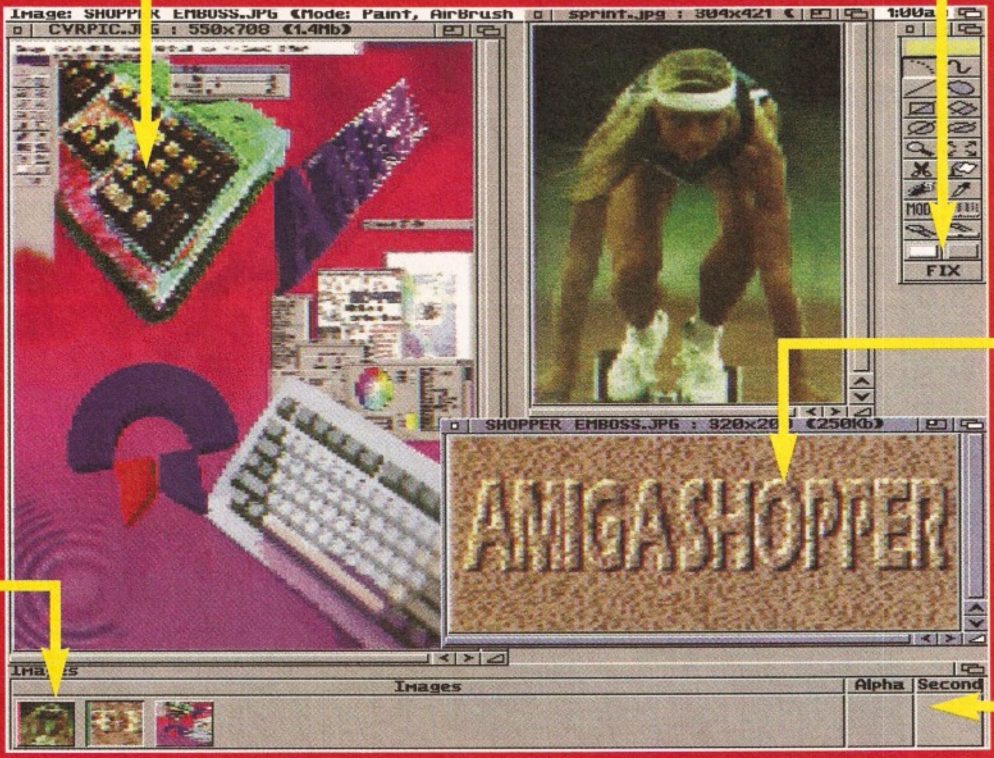
First I created the texture using the whitenoise loader, which was then blurred then sharpened repeatedly and had its colour adjusted using the balance paintmode. Next some text was loaded in, embossed, sharpened then blurred and moved to the alpha channel. Finally the huemap paintmode was used over the whole image. This sort of usage is one of the first things you are shown when learning about alpha channels.



Photogenics

This is an image window – several can be opened at once. They contain a HAM-8 preview of the image and can easily be resized.

The tool provides access to Photogenics' tools and drawing modes.



This logo was created in a matter of minutes using the noise loader and an alpha channel.

The image bar contains icons for each image. Double-clicking on these will bring the image to the foreground.

Any image can be moved to the alpha channel or secondary image buffer by dragging its icon to the corresponding area.

button. This will restore the areas you have covered to their fixed state.

PAINT ALONG WITH NANCY

Making the transition between painting with traditional and electronic media is not easy. Yet, as many Amiga-artists have proved, it can be done. Until recently, little has been done to make painting with the Amiga a more natural or realistic appearance.

However this is an area in which Photogenics excels as it has a host of ground-breaking new features. Photogenics has a large number different brushes that emulate artists' tools, such as an airbrush, chalk, crayon, felt tip, neon, pencil, sponge, spraycan and watercolour. These tools are surprisingly true to their real-life counterparts.

The way in which these work is both ingenious yet simple. It's a combination of IFFs brushes and size, pressure and transparency settings. The IFF brush determines the overall shape of the brush. The pressure setting alters the amount of paint that will be drawn on screen and the transparency setting will determine how much of the image underneath shows through. I know this all sounds pretty clinical, but when you're using the different brushes they really do 'feel' real, especially when you are using a background texture. When you combine the brushes with a graphics tablet, such as the Tabby, it produces an uncannily realistic emulation.

All of this leaves PPaint with a tough act to follow. Indeed, PPaint's – and most other Amiga paint programs' – painting tools seem primitive in comparison. However PPaint does have a couple of tools that Photogenics lacks. It has a nice bezier curve tool, while Photogenics doesn't even have a basic arc tool – a real shame. Nor does Photogenics have PPaint's continuous line and filled polygon tools.

All the same, PPaint is hopelessly out-classed

> **"The level of naturalness achieved with Photogenic's painting options is unheard of at this price and is a joy to use."**

in this department. It simply cannot easily produce convincing emulations of real-world media. The level of naturalness achieved with Photogenic's painting options is unheard of at this price and is a joy to use.

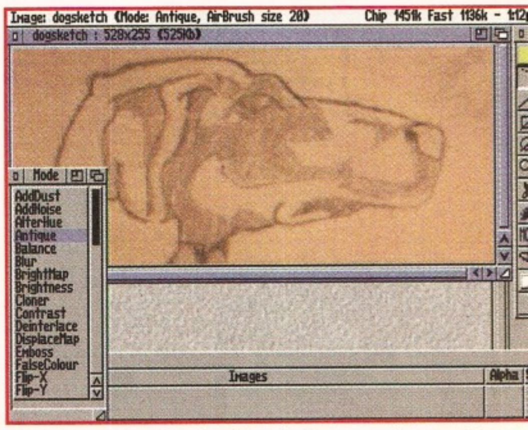
PROCESS OF ELIMINATION

Having realistic painting tools is great if you can draw, but they won't transform you into a great freehand artist overnight. If you can't draw yourself, you'll want to edit existing images to achieve the look you want. This is where image processing capabilities come in useful. They can also create visual effects that would be difficult or impossible to produce any other way.

As well as producing effects, image processing can be used to improve and adjust scanned images and, particularly with the aid of alpha channels, create compositions for montages. The first version of PPaint caused quite a stir when it was first launched, as it was one of the first paint packages to sport any kind of Image processing abilities. Cloanto have built on this early success by adding more image processing functions.

The most notable of these additions is the implementation of alpha channels. Alpha channels can be an immensely powerful feature. By way of a quick explanation, let's just say that they restrict your editing to a limited region of the screen. This area is stored as greyscale data in a screen called an alpha channel (to find out about the practical application of Alpha channels read the boxout on page 26). However Cloanto have failed to fully utilise this important feature.

Use of alpha channels is restricted to brush-based operations. This was a great disappointment as it severely limits its application and makes using this feature a little



That's my dog, that is. The picture was drawn using the pencil brush and paper texture.

Personal Paint 6.1

Ah, the good old bezier curve tool – shame Photogenics doesn't have one.

Brush shapes can be selected from this area. Clicking here with the right-hand mouse-button will give access to other brush buffers.

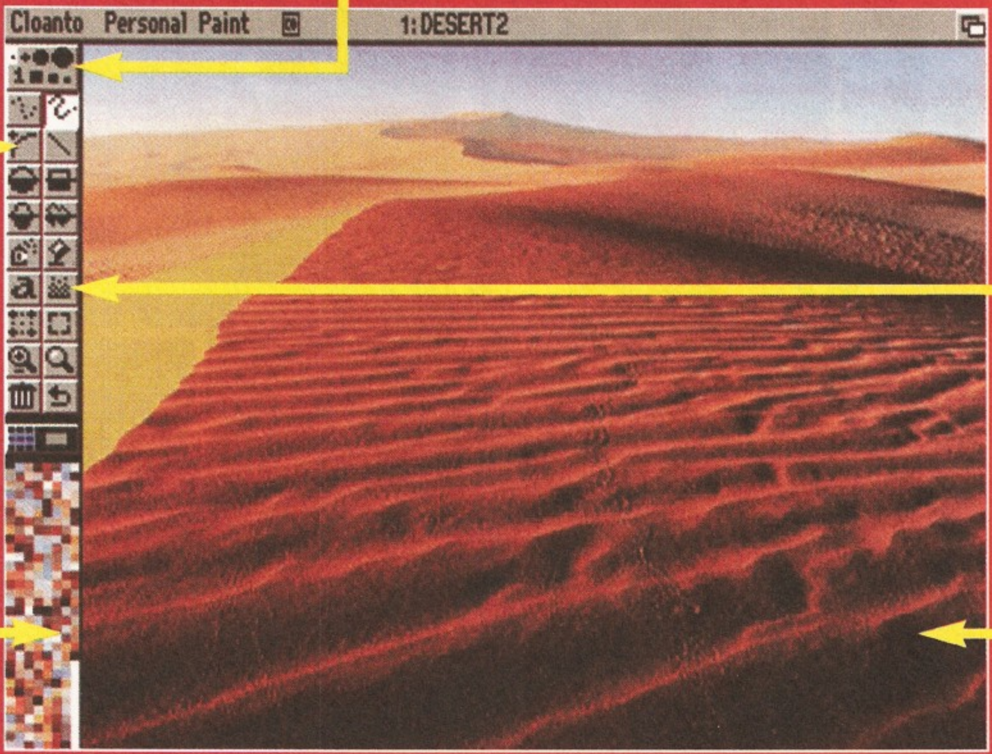


Image processing can be applied to limited regions by using this tool.

Personal Paint gives you instant access to 256 colours of an image's colour palette.

PPaint can open several images at once, but only one can be displayed at any given time.

more fiddly. Don't get me wrong, you can achieve some reasonable results, but is not the ideal implementation of this tool.

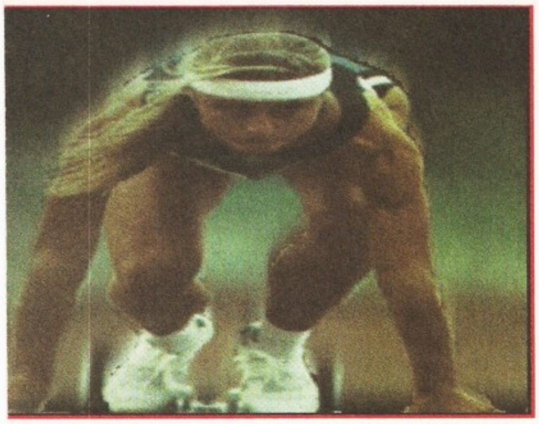
I guess you could say that Photogenics takes a more traditional approach to alpha channels. I must say I prefer it – although it is what I'm used to, it still seems to me to be the most logical and practical way of going about this. However you can use brushes as alpha channels when necessary or convenient.

While alpha channels are extremely useful, they are not the be-all-and-end-all of image processing. A good set of image filters is always welcome. Most filters are matrix-based, put simply, it means that they produce visual effects by changing the colour values of pixels in relation to their neghbours.

Not surprisingly, as filters can be designed quite easily, the programs share several basic filters, as well as a custom filter. This can be used to create your own filters by changing the values of the matrix.

Some of the other filters they have in common include emboss, randomise, sharpen, texture, tint, negative, Gaussian blur, rub through and brightness. While applying a filter to an entire image can produce dramatic effects, sometimes a little subtlety is called for. This is where the ability to apply filters to limited areas of the screen comes in handy. Thankfully, both of these packages can do this, although in different ways. PPaint has a specific limited region processing tool, while Photogenics can use most of its filters as a paint mode.

Of course, each of the packages have filters that are unique to it. But, in fact, there is not much to choose between the two – when one has a filter, the other tends to have a similar feature incorporated elsewhere. However, in balance, Photogenics' ability to use the filters as a painting mode coupled with its brushes provides that much more control.



I traced around this sprinter in paint mode and then changed to motion blur mode.

ANYTHING YOU CAN DO...

Well that covers both the painting and image processing features. However there are features that don't fit neatly into either classification. Some of them are ground-breaking, while others might be considered as just plain weird.

One tool that falls into the latter category is PPaint's SIRD-generator. You know – the pictures that look like random patterns of dots, but are actually 3D images if you look at them in the right way, or after a couple of pints. However I doubt very much that Cloanto will take any legal or medical responsibility if your hair falls out and your gums start bleeding, because your face has been pressed up against your monitor for the last two hours.

> **"The first version of PPaint caused quite a stir when it was first launched as it was one of the first paint packages to sport any kind of Image processing abilities."**

One of the things that has endeared Photogenics to me is its clone tool. The clone tool can remove components of an image, such as a pillar in a hallway, so well that it appears as if they were never there. It does this by replacing areas of the image with other areas. To use it, you must first select it as a paint mode and then click or screen on screen while the mode setting button is selected. This will produce a line that can be dragged to determine the distance between the area to be cloned in relation to the brush's position. The closer these two are the more subtle the change will be.

Another good feature that Photogenics has, is its large number of loaders and savers. Some of the loaders would appear to have been heavily

LOOKING ELSEWHERE

While both these programs do a fine job of doubling as both paint package and image processor, there is much to be gained by purchasing specialised programs.

If you are looking for real image processing power, you should definitely turn to our in-depth review of ImageFX 2 on page 30. This program is frighteningly powerful – you have been warned...

If you are on the lookout for a powerful, flexible and easy to animation and paint package then checkout Brilliance 2. We reviewed back in issue 38, but it is still the best package of its kind.



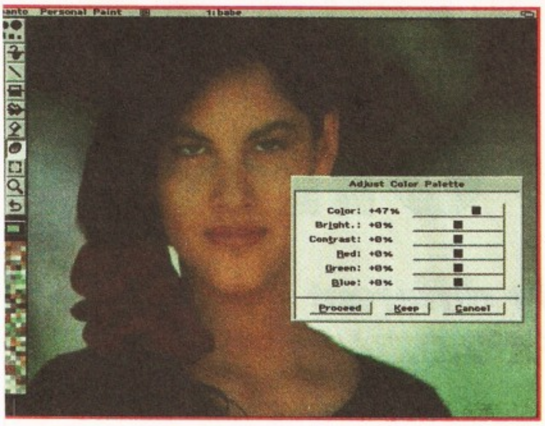
More Memory!

If there is one thing you can never have too much of it's memory. Whether you are raytracing or manipulating large images you are always going to benefit from more memory.

Photogenics and Personal Paint are no exception – especially if you have a 2Mb document open, a secondary image and an alpha channel. Fortunately, both of the programs developed have realised this and have made provision for this need.

Personal Paint has its own virtual memory function built-in. It can be set to kick in when needed and a volume or directory can be selected to be used as memory.

Almathera have not included virtual memory in Photogenics' system. Rather they have made sure it works with the excellent VMM PD program – shame they did not supply it!



One of Personal Paint's best features is the one giving you control of the colour palette.

influenced by ADPro. As with ADPro and ImageFX these can be added to by third parties. They include all the important ones such as JPEG, GIF, IFF and PhotoCD – but not PCX. As well as these image formats the program has several pattern generators. These are: plasma, backdrop, ripples, streaks, whitenoise and colournoise.

This arsenal of supported file formats makes PPaint's file support seem positively puny. While PPaint can load ILBMs, GIFs, PCXs and JPEGs, it can't save JPEGs. This is a major disadvantage as JPEG is the most commonly used format. The program can save pictures as C source code and encrypt files, but this is not much of a consolation.

One of PPaint's features that is certainly a welcome addition to this version is animation tools. There are some pretty nifty ones too, like the new storyboard feature. This can display several frames of an animation in a single window. The window and the frames can be re-sized to allow you to show a lot of small frames or a couple of big ones.

AND THE WINNER IS...

Well, it has been a fiercely fought competition and both products have an impressive array of features. But in the end it's more than simply a matter of features. For my money I'd go with Photogenics. Not only does it have PPaint outgunned in the features and interface departments it simply has a better feel. It also has greater degree of flexibility and power.

This is not to say the program is perfect, there are a few things that I would change. These are mainly in the drawing department. Although the way in which the drawing tools work is very natural, I do miss some of the more 'traditional' computer painting tools. It would be nice to see a curve drawing tool, an improvement of the gradient tool and some fine tuning of the brush and image scaling tools – oh an Arexx port would be nice too. I also had a spot of trouble getting the magnifying tool to work properly.

While it has some way to go before it can cross swords successfully with Photoshop, it is still an impressive program that does share some of its features. All of this is even more impressive when you consider that the creator of this program, Paul Nolan, is only 17. Although I was sceptical at first, I have to admit this is truly a big step forward for Amiga graphics. I can't wait to see the pro version which should be out towards the end of 1995. With Photogenics you can really have it all – well almost! AS

WHAT
Photogenics
£60
WHO
Almathera
WHERE
Almathera ☎ 0181 687 0040
Southerton House
Boundary Business Court
92-94 Church Road
Mitcham
Surrey, CR4 3TD

WHAT
Personal Paint 6.1
£49.99
WHO
Cloanto
WHERE
Ramiga International
☎ 01690 770304
Stablau 'Rin
Pentrefoelas
Clwyd
LL24 OHT

CHECKOUT
Personal Paint 6.1

Interface 80%
Cloanto have stuck to the tried and tested DPaint-look – familiar, but nothing new.

Features 87%
Personal Paint certainly has more features than your average paint package.

Speed 65%
Applying large filters will give you ample time to raise a family and reap the rewards of any long-term financial investments you've made.

Value 87%
It's still quite affordable.

Overall rating 87%
This is definitely an improved package. It's a shame for Cloanto that it was released at the same time as Photogenics.

CHECKOUT
Photogenics

Interface 87%
It's a little confusing to start off with, but it is certainly very powerful and flexible once you are used to it.

Features 93%
This program has more features than you can shake a very shakey stick at.

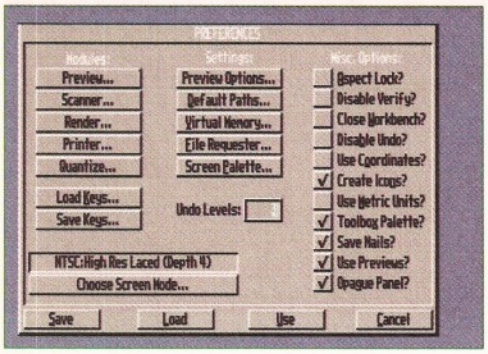
Speed 87%
While you will still have time to make a cuppa while waiting for a Gaussian blur, the program is no slouch.

Value 96%
What are you stupid or something (it's worth every penny) – buy it, right now!

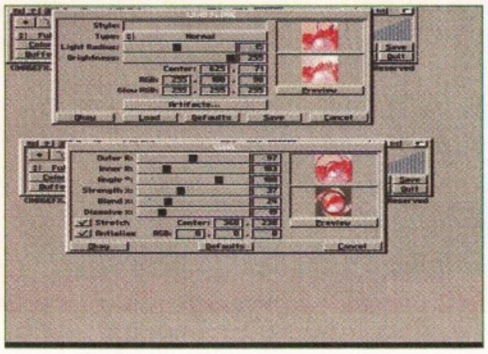
Overall rating 92%
This is the graphics package that everyone will be using.



From left to right:
1. LightWave ship in its normal rendering.
2. The same ship flipped vertically and colourised.
3. A sandpaper texture applied and flares added.
4. The same ship with a wave distortion added.



This is the IFX2 Prefs requester showing all of the possible settings.



All of the IFX2 effects have a preview screen.



Strange effects are doable with ImageFX 2's Alpha compositing.

A significant other

R Shamms Mortier is impressed by a significantly different image manipulation package upgrade – ImageFX 2.0.

When is a software upgrade really an upgrade? Answer – when it is significantly different from previous versions. ImageFX 2.0 is an upgrade, a significant upgrade, over previous versions. For quite a while ImageFX has vied with the other two Amiga image manipulation packages (Blackbelt's ImageMaster and Elastic Reality's ADPro) for dominance.

For a number of reasons which I will touch upon, I think that the 2.0 edition of ImageFX can lay claim to being the king of the mountain, the very best of the lot.

THE IFX INTERFACE

While its competition offers the Amiga user a complex hierarchical interface on the one the one hand (ImageMaster) and a text interface on the other (ADPro), ImageFX keeps its design as close to what the Amiga is all about as possible. The interface design uses as few separate screens as possible (five in all: Scanner, Palette, Toolbox, Render, and Print) and as many graphic controls as any Amiga user could hope for.

There is no need to search for hidden esoteric buttons, as all are clearly labelled as to what they do. There are little things in the interface that wind up being not inconsequential to steady users. One of these is the way that IFX addresses resizing of the graphics. Several options are included that are unique to this software, like the ability to change the targeted structure from pixels to "ruled" units, a mathematical comparison of height and width. There are also size presets and modes. What is important here is that at every level of the software, the same care is taken to give the user a wealth of deep options, which is exactly what image manipulation demands.

IFX3 supports all of the Amiga 24bit environments and than some, including all of the Amiga AGA modes. It adds support for the Epson 300/600/800 Scanners and also the VLAB-YC. I tested it on an Amiga 2000, 3000T, and a 4000 with no crashes or problems. On a 2000, I used it in conjunction with an OpalVision board. Not only does it render like lightning to the hardware, but you can even choose to have IFX come up with the full Opal screen in preview mode as well.

Every Opal owner is going to desire this software for at least this reason. As a owner of a Primera colour printer, I am also happy to see Primera support added to IFX. Owners of the DPS PAR boards will be ecstatic to learn that IFX can convert images to that format. A collection of new image conversion formats might also fall under the heading of "hardware support", because of their ability to address the output of non-Amiga platforms. Among these are support for PICT vector and JPEG (Macintosh); PIC in all resolutions and colour depths, GRASP/GL and DL animation frames (MS-DOS); SGI RGB, WaveFront, and Softimage (Silicon Graphics); MPEG, X-Windows, Abekas 960, Sun Raster, and even Commodore-64 Koala pad output files.

> **"ImageFX 2.0 is the kind of software that keeps the Amiga alive and kicking, and I vote it the best Amiga image manipulation software on the market."**

The only item missing from this reworked option is the inability to import fonts from other than the native font directory. Otherwise, there is more than the usual number of options here. One of my favourites is the ability to import and export large blocks of text that you may have saved out in ASCII from your word processor. As an aid in the production of quality graphics, IFX2 has a special toggle that allows you to anti-alias the imported fonts, necessary in the case of jaggy bitmaps.

PREVIEWS AT LAST!

Applying an effect to a graphic can take a comparatively long time, especially when the effect is a complicated one. IFX2's competition makes you wait until the effect is applied before you can view the results and then undo them if they aren't to your liking. Not so for IFX2. When an effect is about to be applied to either the whole image or a selected region, two representative postage stamp sized views pop up next to your choices. One represents the graphic selected before the effect, and the other a comparison after the effect. As you alter the parameters with sliders and choose "preview" again, the new choices made alter the view of what will become the final image. This option alone will save you a bundle of time and frustration in the manipulation of your images.

"Preview" also has another meaning in IFX2. Images are manipulated on a separate screen from their final rendering. Final renders may be

This is a PostScript pic of a tiger, imported into IFX2 with the new PostScript loader and then manipulated as a new tiger. "Cheetah spots" background was added.





This is one piece from a gallery series of prints I am producing. It's called "Eve Emerging". The picture is taken from a video, and the lightning, ripples, flare, and snake skin on Eve two's head were all developed in IFX2.

targeted to standard Amiga, Amiga 1.3, DCTV, OpalVision, EGS, and "Foreign" selections (the last represents other boards like the Retina). What's neat about this package is that even the preview screen can be set up as Amiga modes, AGA modes, DCTV, OpalVision, "SuperAmiga" modes, or an appearance on the resolution of the WorkBench screen. As an OpalVision owner, I was excited to be able to select the Opal option and see the IFX2 menu superimpose itself over the 24bit OpalVision screen. As part of the process, selections for the preview mode can be addressed as grayscale, colour, dithered colour, and HAM (with a special "Lo-Res Only" option added). IFX2 allows you to truly tailor its use to your own unique specifications.

THE PREFS AT THE HEART

The IFX2's image manipulation engine is driven by the selections you choose in its special Prefs section. A simple mouse click gets you there at any time, so if your machine configuration changes, you can simply change and save the new preferences. The only selection that I miss having a go at is one that would allow more than a single printout at a time, but everything else is here, including all of the various preview options mentioned earlier. There's even a separate area where you can enable virtual memory, including whatever hard disk partition is to be used for it.

Personally, I'm a bit squeamish about using virtual memory as I hate the idea of continuously writing to my hard drives, but that's just me. There's a whole list of miscellaneous options that can be checked off and saved, like creating icons (hooray!), saving thumbnails of the saved image files, and toggling coordinates on. Another important consideration is that as long as your RAM is heavy enough, you can increase the number of Undo levels you like to have available.

AWESOME PAINTING AND FLARE EFFECTS!

Before IFX2, I lauded ImageMaster as the hottest Image manipulator when it came to creating lens flares, but now I have to vote for IFX2. What pushes me in that direction is that IFX2 allows you to preview every effect before you apply it, including interactively moving the flare parameters in the preview stamps. The added options make flare creation limitless as far as variety goes. And now... lightning! Yes, IFX2 has a true lightning bolt generator with so many options you may stall out for weeks just playing with this attribute alone.

And what about more options as far as the painting end goes? IFX2 is one of the most versatile painting tools that the Amiga can boast, and much of that is based upon its new "PaintFX", one of the choices in the Special Effects list. On bringing it up, you can select from a long list of options (like Biochain, Charcoal, Cheetah, Eye, JFK, Medical, Pencil, Rake, Smoke, and dozens more) and apply your choice to either the whole picture or to a selected region. Most of the painting effects are unique to IFX2, so don't expect to find them in other software.

CONCLUSIONS

Not to forget that this software is many times more gentle to the use of your RAM and ROM than either of its competitors. As long as your system has enough RAM (or you add the virtual memory options), you should never face the frustrating problem of having the software refuse to load a graphic. A separate program called "IMP" (ImageFX Multi Processor) gives you the capacity to do on-board batch processing, and as opposed to using an esoteric and techie exclusive interface to do it, the whole thing is spelled out in plain language on an intuitive interface.

The design is elegant, and it will automatically generate Animations (loop toggleable), single frames, or 24bit frames as a target. Added to this is the capacity of another module, AutoFX, that will apply all preset effects to any file you choose, and which also allows automatic batching.

I want to both rave about this software and also thank Nova Design for sticking with the Amiga in their development instead of jumping ship as some others seem to have done early on. On the MAC, there is a program called PhotoShop that is widely acclaimed for its image enhancement and manipulation capabilities. There is also a high end painting program called "Fractal Design Painter". ImageFX 2.0 combines the best of both of these and targets the results to video art.

ImageFX 2.0 is the PhotoShop/Fractal Painter for the Amiga video artist and animator. This is the kind of software that keeps the Amiga alive and kicking, and I vote it the best (that's right, the *best*!) Amiga image manipulation software on the market.

If you are an Amiga artist or animator and you don't have IFX2 in your kit of tools, you're missing out big time. IFX2 is one of a small handful of the best Amiga products of 1994. AS

WHAT
Image FX 2.0MSLP – £249
WHO
Nova Design
☎ 0101 804-282-58681
Fax: 0101 804-282-3768
BBS: 0101-804-965-0234
WHERE
Silica ☎ 0181 3091111

CHECKOUT IMAGEFX 2.0

Interface: **91%**
Not as innovative as Photogenics, but it is very easy to use and get your brain around.

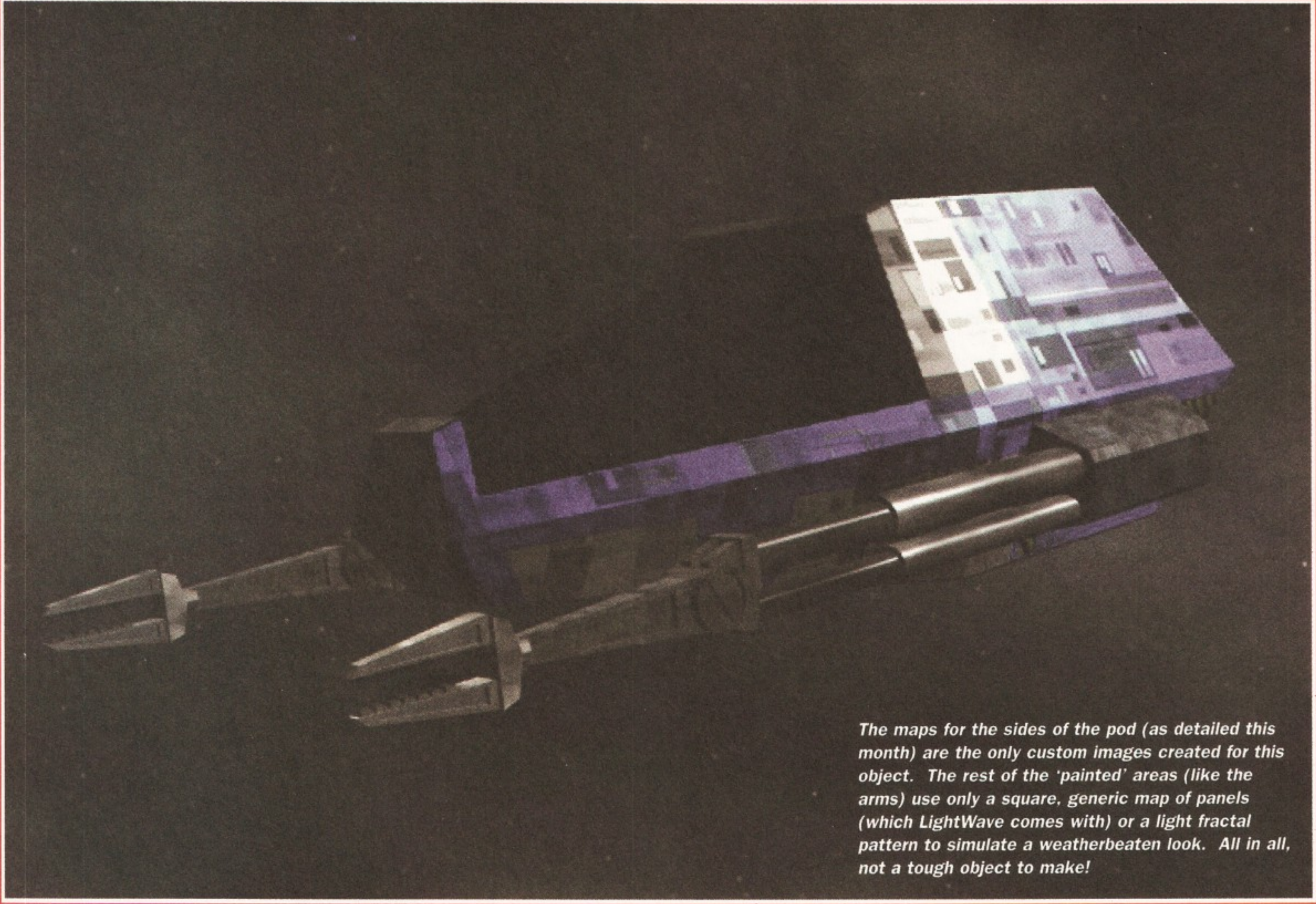
Features: **95%**
Plenty of new and powerful features ensure that ImageFX can handle more or less anything.

Speed: **85%**
Some of the effects can take a very long time, but the preview allows you to see what they are likely to be like before committing yourself.

Value: **83%**
Programs like Photogenics and Personal Paint are cheaper, but nowhere near as powerful...

Overall rating: 94%
If you are an Amiga artist and don't have ImageFX 2.0 in your toolbag, you're missing out big time. ImageFX is one of the best Amiga products of 1994. Don't miss it!

AMIGA SHOPPER BEST BUY



The maps for the sides of the pod (as detailed this month) are the only custom images created for this object. The rest of the 'painted' areas (like the arms) use only a square, generic map of panels (which LightWave comes with) or a light fractal pattern to simulate a weatherbeaten look. All in all, not a tough object to make!

The 3 Ds of 3D Animation Part 2

Mojo, the man who works with Ron Thornton on the TV series Babylon 5 is here with the second D in his series on 3D modelling –

Decoration

1

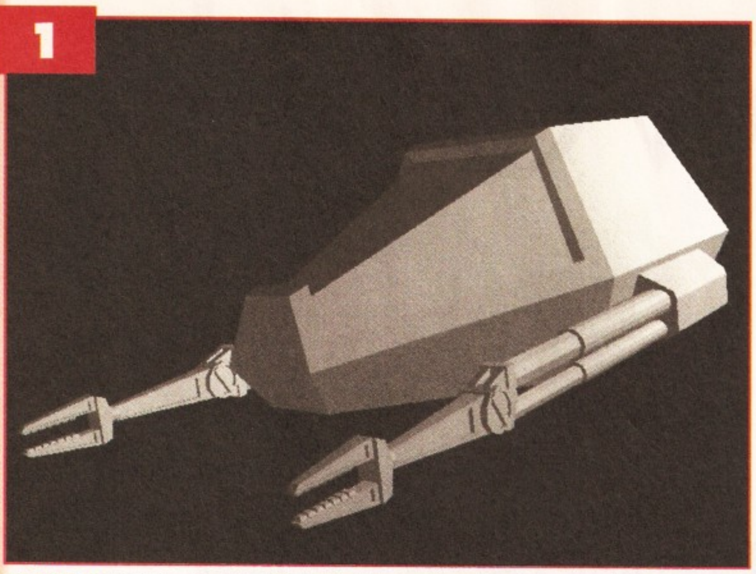


FIGURE 1: ***This is what the Work Pod looks like after being modelled. A keen eye may be able to spot the difference between this model and those seen weekly on Babylon 5. Give up? Mapping!***

2

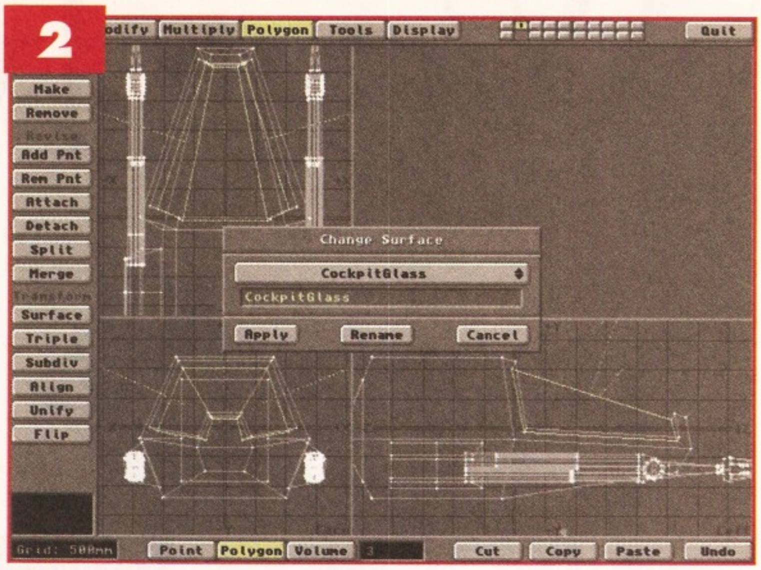


FIGURE 2: ***In LightWave, polygons are selected by dragging the mouse over them (the yellow ones are selected). They can now be manipulated in any way, independent of everything else in the layer.***

3

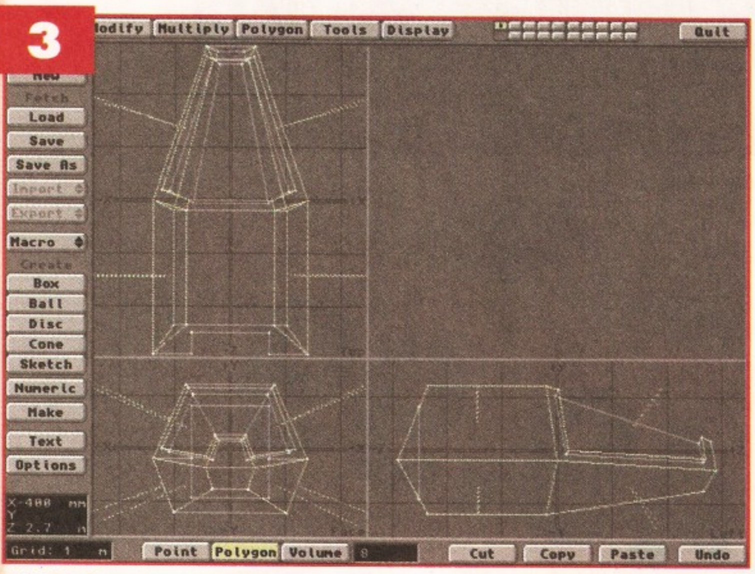


FIGURE 3: ***All the body polygons facing the X axis were selected and named "Pod X." The dotted yellow lines show what direction the polygons are facing - if the line points inwards, they are flipped the wrong way and will appear as a hole in the object!***

4

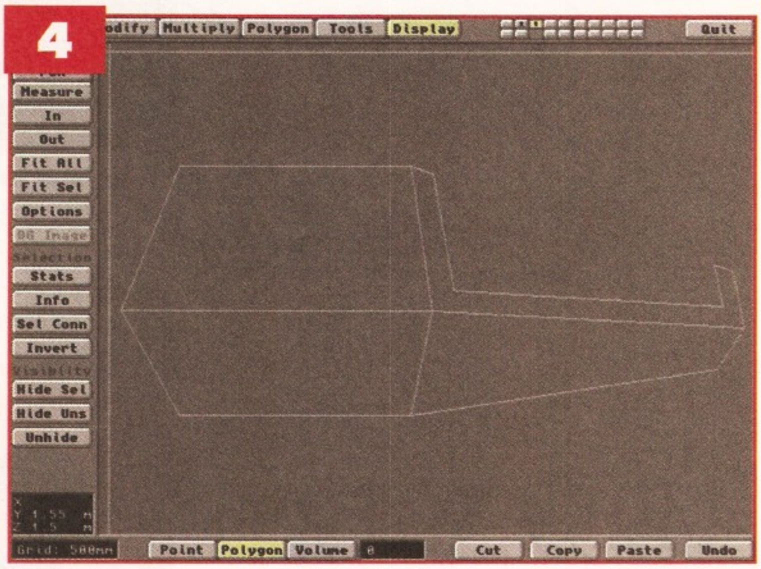


FIGURE 4: ***LightWave's modeler allows you to drag out any of the 4 views for more detailed work. In this case, a screengrab of this enlarged wireframe will make for a perfect stencil to create an image map.***

Remember those days of yesteryear (or, depending on your age, yesterday) when you were building model kits of the Starship *Enterprise*, or perhaps race cars? Remember how after the last drop of glue had dried and you compared your creation with the picture on the box you thought, "*mine looks awful.*" The picture looked like a real spaceship, ready to tackle the galaxy, while yours simply resembled a heap of cheap, white plastic with lopsided engines.

However, once you went through the trouble of breaking out those little bottles of paint, applying the decals and maybe even airbrushing a few scuff marks, it began to look like something. If you were really ambitious, you'd add a lighting kit and even the hobby shop guy was impressed.

By the same right, modeling is only the beginning of making a good 3D object. If you actually tried to make the *Babylon 5* WorkPod described last month, you've probably discovered this fact. Upon first hitting that render button, you wind up with something hauntingly similar days past – a white hunk of plastic (see figure 1). This is because painting and adding decals (surfacing and texture mapping) to your 3D object can be just as important, if not more so, than building the model itself. Just like in the old days!

This month, you're going to learn how to apply the proper techniques to transform that boring Pod into the exciting, butch one you see on TV.

GETTING STARTED

First off, you must give your object a few 'surfaces'. This allows you to assign certain colours and images to specific areas of your model – a sort of high-tech way to prevent paint from spilling where you don't want it. Figure 2 shows how simple this is – just select the appropriate polygons in modeler and type in a name for them. While this *can* be done to a finished model, it may be easier to name polygons as you create each section of the object.

Remember trying to paint those hard-to-reach places in a plastic model that had already been built? And how the instructions you never paid attention to suggested painting them before gluing them together? The same applies here. Trying to select individual polygons in a complex, finished model can be just as harrowing. Naming as you build is much easier.

If you look at the picture of the finished Pod, note that each area that looks different has a unique surface name. This model had about a dozen surfaces, while an object like Babylon 5 itself has well over a hundred.

Once the object has had its surfaces named, you can begin to apply rudimentary colour and texture to it, usually by simply moving numeric sliders or typing in a percentage. Parameters such as colour, diffusion (how much light it gets), specularity (shininess), transparency and others can be easily defined (any good 3D manual will get into the details, which differs for every program).

While this method works well for broad surface settings, precise control over the look of an object can only be had by actually painting it with image maps – actual pictures containing the detail you wish to see on a particular surface (panels, markings, numbers, multiple colours, etc).

We'll start by painting, or 'mapping', the most complex surface, the pod sides.

X MARKS THE SPOT

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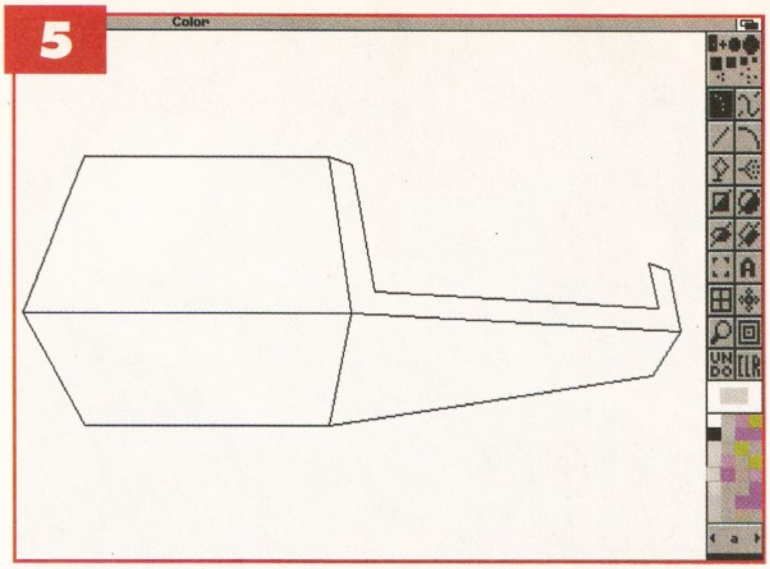


FIGURE 5: ***The stencil loaded into DPaint. Since creating a map in the exact shape of the object is the tough part, this screengrabbing technique makes life easy! Now it's just like a colouring book...***

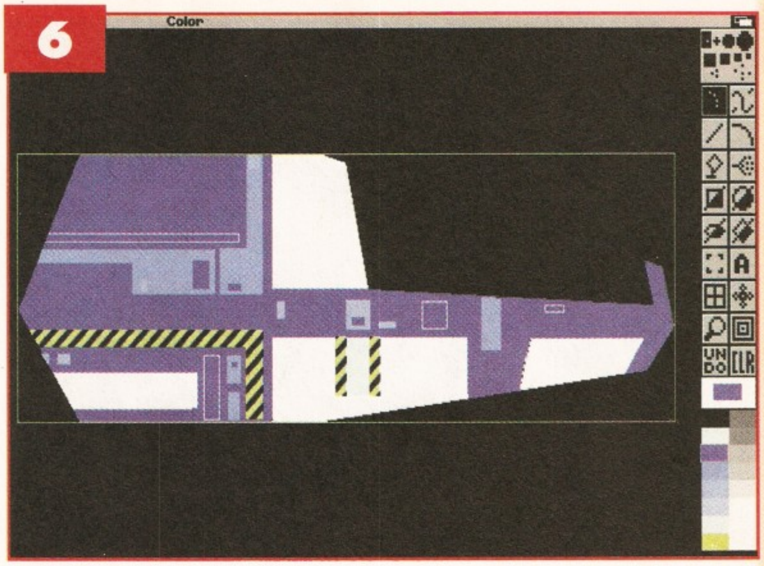


FIGURE 6: ***The finished colour map. This is a good place to add decals, insignias, warning signs or anything else that must be in colour. Very often a colour map is not needed at all and the solid object colour set in LightWave is enough. The yellow box shows how the image must be cropped.***

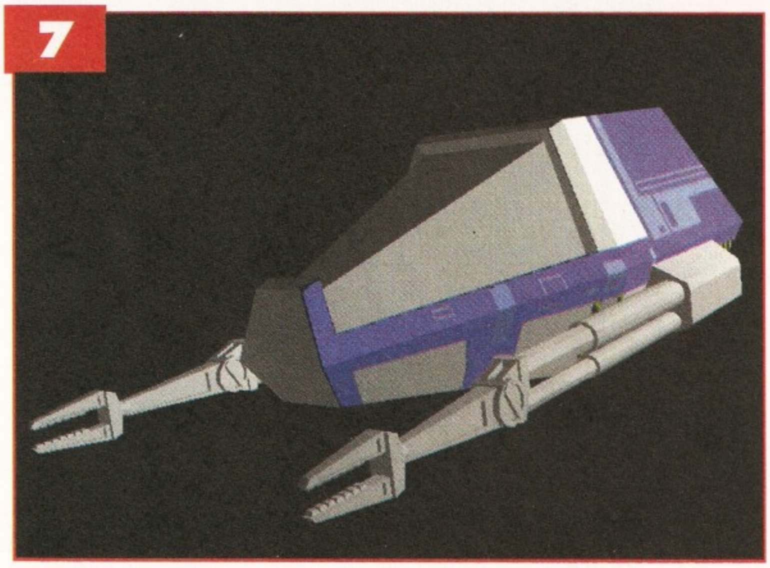


FIGURE 7: ***The results of the colormap alone. Although the map itself contains few colours, note how the natural shading of the object gives the appearance of far more. See how easy this all is?***

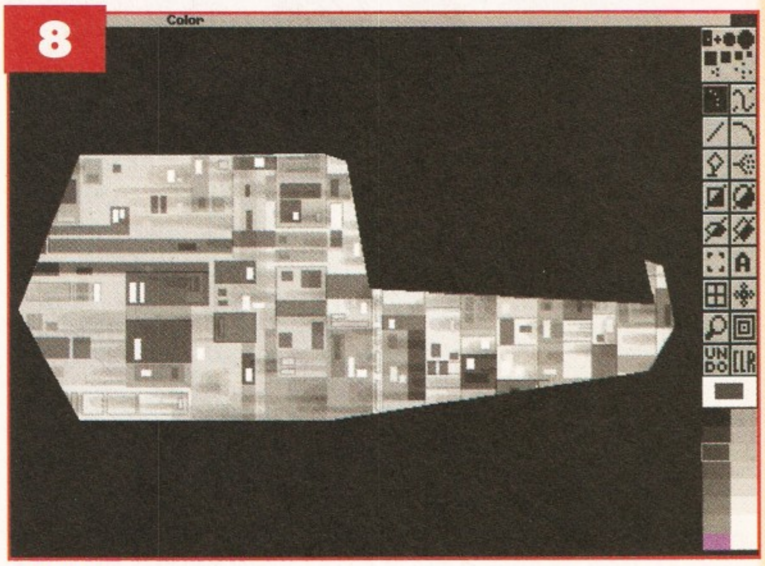


FIGURE 8: ***Back to DPaint for the diffusion map! Diffusion tells us how much light hits an object. It will specify which areas get more or less light; it will not obscure the colour map, but augment it and create the illusion of more colour.***

the X,Y and Z axis of 3D? Well, it's back to haunt you. These directions are also important to mapping. Just as any polygon is built along these 3 axis, they must also be mapped this way. Since the left and right sides of the pod are standing along the X axis, they must be mapped this way. For convenience, they should be named "Pod X" (see figure 3). In addition, unlike a 'real' model, you don't have to worry about painting both sides. As long as you select and name both the left and right halves of the pod "Pod X", the map will travel straight through one side and apply itself to the other (after all, the object is symmetrical). In you wanted each half of the pod to be unique, you could name each side differently.

The map you are going to paint needs to be in exactly the same shape as the surface it will be applied to. The easiest way to do this is to use the object itself to create an outline you can load into a paint program. Figure 4 shows how the side view of the pod body was dragged out and enlarged (the LightWave grid and points visibility were also turned off). By using a program such as Art Department Professional (or one of many PD utilities), you can grab a screenshot of this view, providing you with an IFF image of the modeler screen.

Figure 5 shows this image (with the tool buttons painted out) loaded into Deluxe Paint. This is a perfect place to start from. Whatever you draw within this area will be applied to the side of the pod – just imagine you are actually painting the model itself! Figure 6 gives a suggestion of what a good colour map would look like, including hazard stripes and lots of little details.

Remember, the map must be the same, exact shape as the pod. When you've finished, you must save the colour map as a brush, dragging out the square brush box to the precise edges of the image (don't worry about the black areas that fill out the square). The yellow outline in figure 6 is a simulation of what your drag box should look like. Using the 'Crop Visual' operator in Art Department (if you have it) can make this easier.

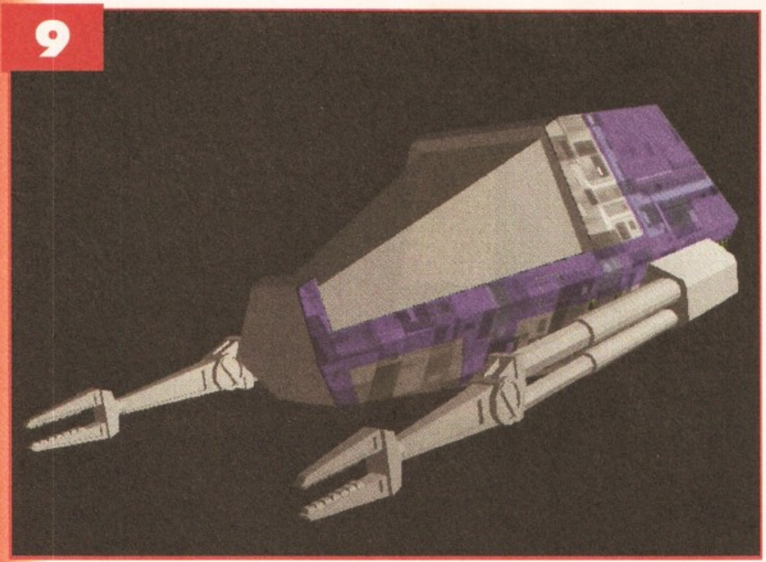
Once the map and object are loaded up into your 3D package (preferably LightWave), the map should be applied to the appropriate surface as a planar image map (meaning flat) along the X axis. Figure 7 displays what the colour map alone looks like. What a difference! This certainly looks better, but it still needs more – something else to bring it to life.

TEXTURE MAPS

Yes, I'm sure many of you thought a colour map *was* a texture map but, in order to understand them, it helps to separate the categories. A *colour* map hides your object and replaces the surface, while a *texture* map augments it; modifies it; textures it. A texture map won't change the colour of your object (or its colour map) – only enhance what's there.

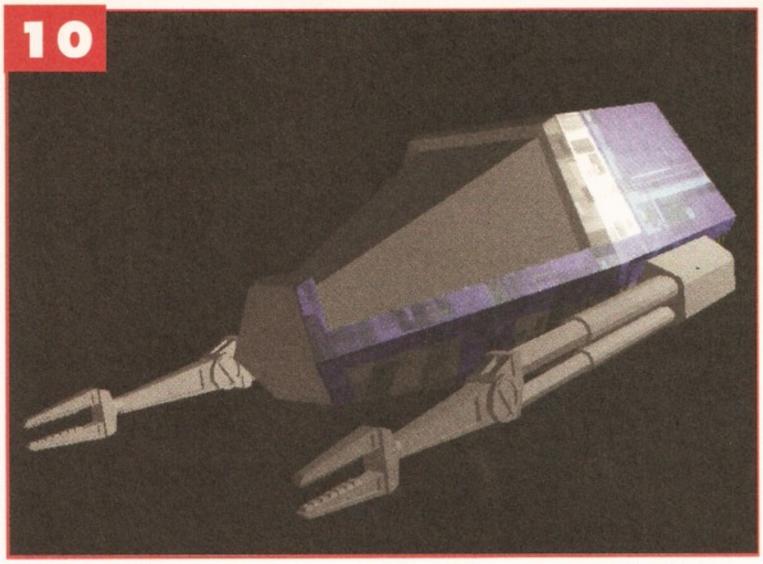
Take a look around you. Most surfaces you see – a wall, a table, a computer – all contain perhaps several primary colours; the rest is lighting and texture. That wall may be a solid grey, but the small bumps and dirt are what gives it character – what makes it real. This texture is what can transform a dull, ordinary 3D object into a sexy, new, exciting 3D object.

Perhaps the only 'secret' to the look of *Babylon 5* is its wide use of high-tech 'paneling' on just about every object. These panels, created with a diffusion map, help break up a flat, single-colour surface by adding contrast in an interesting, science fiction-like pattern. As a specular map,



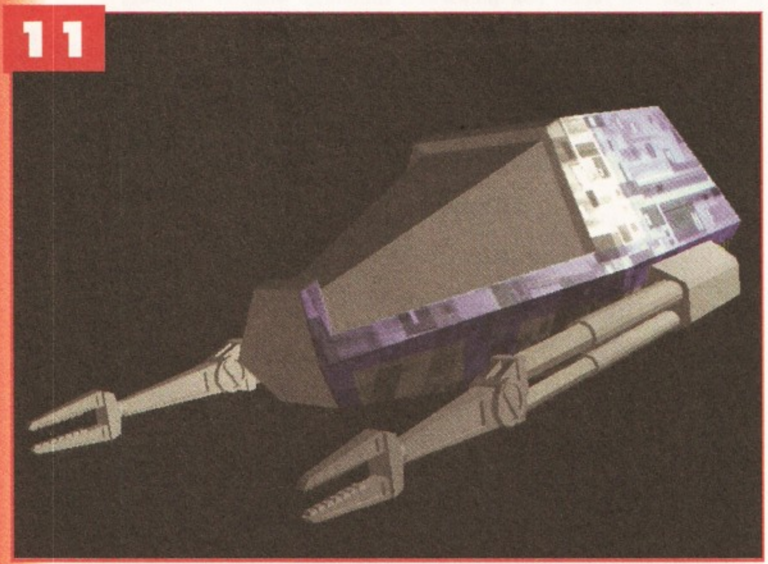
9

FIGURE 9: ***What you see here aren't panels, but light and dark areas in the shape of panels – the diffusion map on top of the colour map. This illustrates why a solid colour object and a good diffusion map are all that's necessary.***



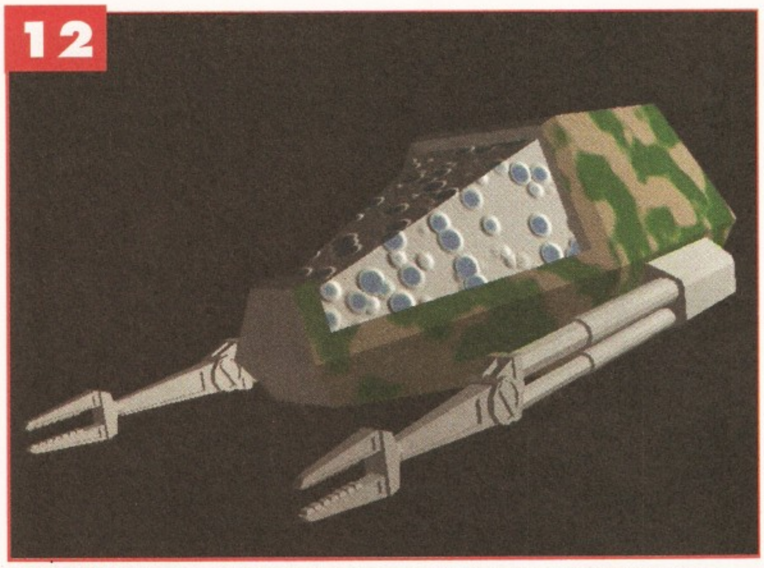
10

FIGURE 10: ***When specularity is turned on, a shine runs across the object. However, the surfaces are affected uniformly, and the shine looks fake. In fact, the work done with the colour and diffusion maps seems negated!***



11

FIGURE 11: ***Using the diffusion map as also a specular map fixes this. It tells the object which areas (in the shape of panels, of course) are more or less shiny. This works in the same areas as the diffusion map and creates a cohesive pattern with realistic contrast.***



12

FIGURE 12: ***The camouflage pattern was not drawn, but generated with a fractal procedural texture. The cockpit had an even stranger texture applied. At the click of a button, these images can also pulsate and move, sometimes useful to create the illusion of smoke or even fire.***

they give an object an exciting, metallic shine without it looking like plastic (a problem found in many 3D animations that don't use specular maps). Figures 8-11 illustrate this.

Since colour and texture maps can live peacefully with each other, you can add detail to the pod sides without disturbing what you've already done. Figure 11 shows the panel diffusion map in Deluxe Paint, created in the same fashion as the colour map – by starting with the wire-frame outline and filling it in. Texture maps need only be black and white, since they actually shade the colours already there without adding new ones. The light and dark areas of a texture map define how light or dark the surface will be (in the case of diffusion) or how shiny (with specularity) – they don't actually cover anything (although it may look like it).

The panel map you see would work fine as both a diffusion and specular map. If you wanted your ship to be shinier, simply brighten the map in an image processor and save it as a separate specular map (remember, brighter in a texture map means more, with white equalling 100% and black 0%). You would apply it the same way you did the colour map, as a planar image map along the X axis.

FINISHING UP

Other areas of the pod should be mapped similarly, although a precise image map need not be created for 'generic' areas of the object.

Take the boxy 'shoulders' that attach the arms to the body of the pod. Since they are mostly square, a *cubic* diffusion map of paneling was the only image added to it (the colour was created by LightWave sliders – the shading produced by the diffusion map was good enough). Cubic mapping takes any image (square shaped is best) and maps it along the X,Y and Z axis of an object simultaneously. This is also how the roof, floor, nose and entire backside of the Pod were mapped. In fact, most surfaces in Babylon 5 are created this way, using a full-screen, generic image of panels, saving custom mapping for the larger, more visible areas.

A great way to dirty down an object is to apply a procedural texture, usually some form of fractal pattern (see figure 11). This type of texture is computer-generated and can create very handsome surfaces without much effort. These patterns (usually in dozens of varieties, popular ones including brick, wood and checkerboards) will cover an entire surface with ease and save you the trouble of painting such commonplace textures. Maps can also be scanned in from books and magazines and later cropped to fit a surface.

These other techniques can be a welcome addition to image mapping, although some people try to take the easy way out and use only scanned or computer-generated textures. While this may fit the bill in many cases, there is simply no quality substitute for a good, hand drawn image map. A light fractal pattern to make a surface look more 'weathered' will often be added to our models, but that is usually the extent of procedural textures on *Babylon 5*.

With Detail painting out of the way, there should be little stopping you from finishing that Work Pod. These fundamentals of image mapping, along with a good software manual, should be all you need to get going and create some fantastic objects. The only step missing now is how to actually animate the thing.

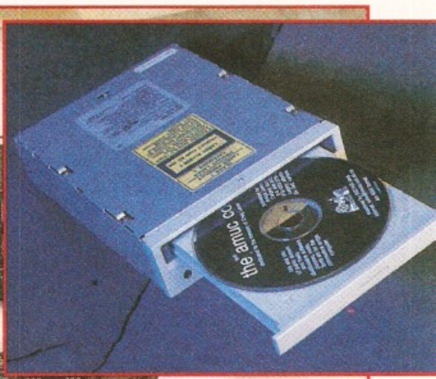
But that's next month... AS

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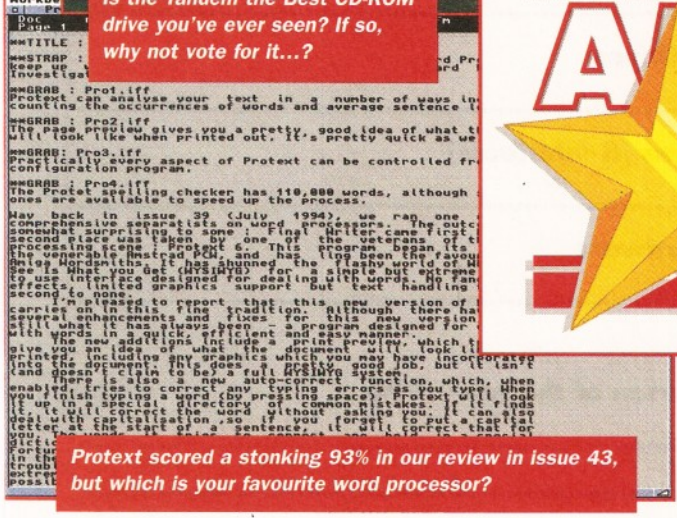


Did you agree with the A1200 accelerator supertest in issue 43? Which one wins your vote?

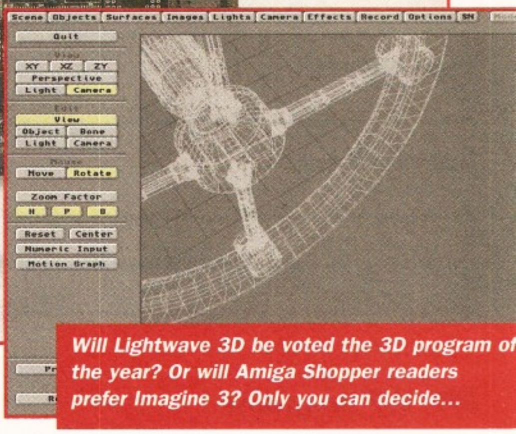




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Protext scored a stonking 93% in our review in issue 43, but which is your favourite word processor?



Will Lightwave 3D be voted the 3D program of the year? Or will Amiga Shopper readers prefer Imagine 3? Only you can decide...

AMIGA SHOPPER STAR PERFORMER

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There is no doubt that there are a vast number of innovative, exciting and unusual products available for the Amiga. Everything from PD image processing programs to immensely powerful accelerator cards can be found out there somewhere.

Here at Amiga Shopper we hate to see all of that inventiveness going unrewarded, so we have decided to recognise the efforts of the people who design, build and market these products by setting up a whole new concept: ***The Amiga Shopper Star Performer Awards***. These will recognise the efforts of the great and the good in the Amiga world, be they a PD programmer or a company pioneering the cutting edge of Amiga technology.

And who better is there to pick the products which should receive these awards than you – the Amiga Shopper reader and devoted serious Amiga user? So, all you have to do is to pick the programs or products in the various categories below, and we'll tally the votes to find out what you, the serious Amiga user think is the best product available in each of the categories.

So what sort of thing could you vote for? Well, just sit down and think about all the Amiga stuff that you have. Which DTP program do you use the most? Which piece of video hardware has made your latest extravaganza easier to make? All you need to do is write the name of the product in the space on the form in these pages and send it in to the address that follows.

You don't have to vote in all of the categories, so just leave the 3D programs one blank if you haven't used any 3D programs. The products you nominate don't have to be new ones – if you've been using a product for several years and it's been incredibly reliable, then why not nominate it in one of the hardware categories. After all, reliability is important too...

Don't forget that we are also looking for the best PD programs. Has the PD version of the networking software TCP/IP made your life easier? What about the PD image processing program Image Studio? Would you vote for this as the PD utility program of the year?

There is also a special bonus category: Amiga Person of the year 1994. If you think there is one person on the Amiga scene who has done more than any other to push the Amiga forward, nominate them here. It could be a PD programmer, it could be a hardware designer, animation designer, or even somebody who wrote a book that you've found incredibly useful. It could even be somebody you know who has used an Amiga in a strange or unusual way.

And don't forget the final category – The Editor's Special Award for innovative Amiga use. This will be decided by the Editor of this magazine, and will be awarded to the person who, in his opinion, has made the most interesting or inventive use of the Amiga. Please feel free to send in your suggestions for this category.

In order to make it worth you while sending in your entries, we've got together with noted Amiga dealers Gordon Harwood Computers to offer you a quite stonking prize. One person will be the lucky winner of a £400 voucher, which they can spend on any product sold by Harwood's. You could buy yourself a new Hard Drive, or get hold of a modem and video digitiser without having to spend a penny! You could even get your Amiga moving by fitting an accelerator! If you don't vote, you can't win...

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SPECIAL

Amiga Person of the year 1994

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Details of all entrants will be supplied to the sponsors of these awards. If you do not wish to receive any further information from them, please tick the following box. ☐

Just cut out (or photocopy) this form, and send it to the usual address:

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BA1 2BW

Alternatively, you can E-mail your entries to:

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2:2502/129.1 (Fidonet)

Please, only one entry per person. The closing date for the awards is Tuesday, January 31, 1995. All the usual competition conditions apply.

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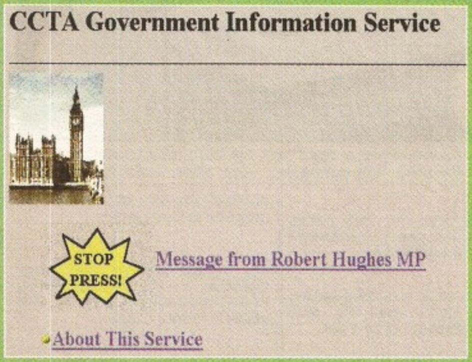
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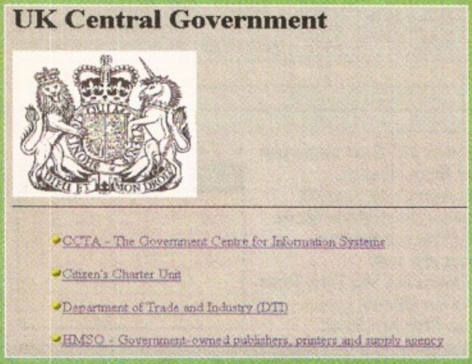
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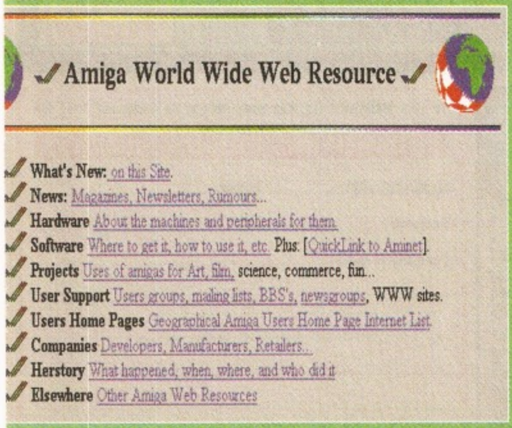
This month Wavey has been surfing in cyberspace, wandering around the World Wide Web, and investigating the darkest corners of the on-line systems to bring you all the latest news and gossip.



This is what the Government Information Service World Wide Web site looks like.



At last the British Government has accepted the existence of cyberspace.



The amazing Amiga World Wide Web resource site is a treasure chest.

Good day to you and welcome aboard for another excursion on the information superhighway. This month we'll be talking politics, rock 'n' roll and I'll be shamelessly plugging my new Internet book, All You Need To Know About (*snip – Ed*)

CYBER-POLITICS

It's taken a while, but finally it looks like the people who run this country have actually woken up and found they are living in the 1990s. Yes, politicians are slowly discovering the Internet! OK, so MPs here are not as Wired as their counterparts on the other side of the big pond that's true, but at least it's a start. Already you can send Email to Tony Blair (tony.blair@geo2.geonet.de), Paddy Ashdown (paddyashdown@cix.compulink.co.uk) and David Shaw (david@dcshaw.demon.co.uk).

Who is David Shaw? Well, he is the only Tory MP that I know of who has an Internet Email address. Sadly, you can't get in touch with johnmajor@dull.grey.co.uk yet. Of course, this is all well and good, but do they listen to your opinions when expressed by Email any more than they do when you write by conventional means? Less, it would appear.

There is a story doing the rounds that somebody complained that Tony Blair didn't answer his Email, and was told to put the complaint in writing and post it!

Things are looking up though, because the Government Information Service announced its on-line presence just a few days previous to me writing this column. Here's the lowdown:

The World Wide Web site is located at http://www.open.gov.uk and contains links to information on HM Treasury, Citizens' Charter, Dept Of Trade And Industry, Her Majesty's Stationery Office and more. Nothing particularly exciting, but then we are talking UK politics here.

An HM Treasury mailing list is operating from majordomo@hm-treasury.gov.uk and documents are available by FTPmail from ftpmail@hm-treasury.gov.uk (just send a message with the word help in the text for more details of these). An FTP site is situated at ftp.hm-treasury.gov.uk

WHO WANTS TO BE A MILLIONAIRE? WAVEY DOES!

Looks like everyone wants to be a millionaire if the launch of the National Lottery was anything to go by, and I'm no exception. Actually I am an exception, because I won a £10 prize on the first lottery, and I won using numbers selected in cyberspace. Delphi has set up its own National Lottery forum, and as well as talking about the best ways to win you can use the Delphi random number generator to pick your numbers. I asked this amazing device to pick six numbers between one and 49, and three of them were called in the first draw. So how can you use the latest technology to do the same? Here's how it works:

1) You need to be a member of Delphi (phone 0171 757 7080 for details).

2) Join the National Lottery forum by typing Go National.

3) Select the Conference option.

4) Type Join Lotto.

5) Type /groll.

6) Type /roll 6d49.

The random number generator then rolls six 49-sided dice and presents you with the numbers. Each time you type /roll 6d49, the dice roll and you'll get a new set of six numbers!

BEAM ME UP SCOTTIE

And staying with Delphi for the moment, the official UK Star Trek fan club have opened an on-line support forum. You can buy merchandise, chat with other Truckers (that is the right term isn't it?), and even download Star Trek goodies. And who says that cyberspace is full of train spotters, anoraks, and sci-fi freaks?

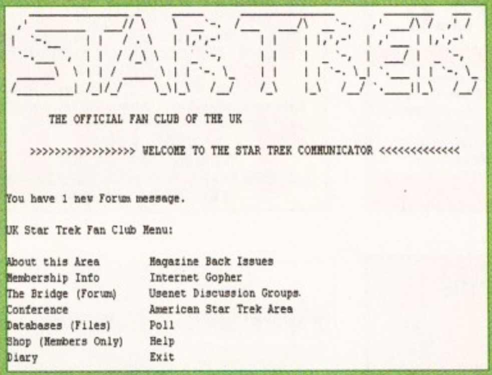
AMAZING AMIGA WEB RESOURCES

In response to a large number of Email requests for help in finding Amiga resources on the Internet, I've been off searching the World Wide Web to see what I could find. And I don't think you'll be disappointed if you start off by pointing your World Wide Web browser in the direction of http://www.cs.cmu.edu:8001/Web/People/mjw/Computer/Amiga/MainPage .html

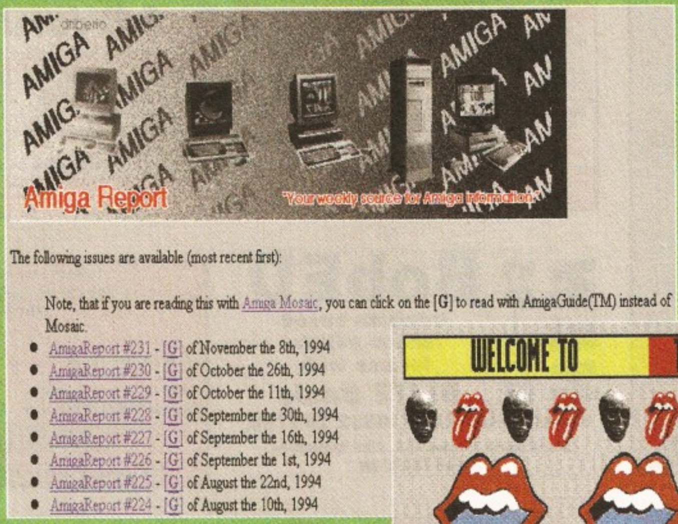
From here you find yourself presented with a veritable treasure chest of Amiga-related choices. How about reading the well-respected electronic Amiga magazine *Amiga Report* on the World Wide Web? (With *AmigaGuide* if you use *Amiga Mosaic* of course). Or what about taking a look at the latest news about Commodore, the Picasso II board, or the Video Toaster? There is an option to look at software resources, and this includes a fast link straight to the massive Aminet software archive, as well as information of interest to all AMOS and ARexx users.

The Projects option is also interesting – as well as pages about the use of the Amiga in films there's a wonderful gallery of Amiga-generated artwork. Usenet Newsgroups and Amiga mailing lists can be accessed by following the User Support link, and developers and manufacturers are well served in the Companies section. If you opt for the Elsewhere link you find yourself transported across cyberspace to many different and varied Amiga World Wide Web sites.

If you are serious about your Amiga, and serious about your Comms, which I know you must be or you wouldn't be reading *Amiga Shopper* now would you, then you really have a duty to check out this wonderful WWW site. Leave some feedback



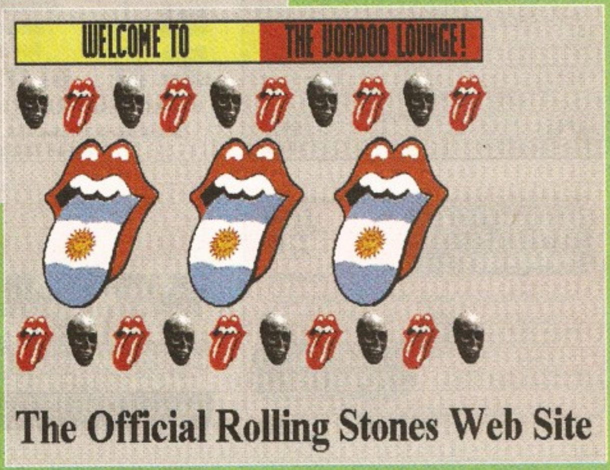
Star Trek has arrived, inevitably I guess, on line.



Read Amiga Report on the World Wide Web. Isn't Comms just wonderful?



Just some of the Amiga resources you can jump straight to from the World Wide Web.



The Rolling Stones perform live on the Net.

as well and let the people who make it possible know how much you appreciate their hard work. On-line Amiga resources are scarce enough, the few people who are actually doing something out there in cyberspace deserve as much encouragement as we can give them.

HEY, YOU, GET OFF OF MY CLOUD

It was hailed by the media as the rock 'n' roll event of the century – the first ever live rock concert on the Internet courtesy of The Rolling Stones. Yes, if you happened to be in a position to point some seriously high-powered computer hardware in the general direction of http://www.stones.com on the night of Friday 18th November, then you could have joined countless other disappointed music lovers in watching some slow and fuzzy video of Mick and the lads strutting their stuff.

This 20-minute concert was meant as a taster for a pay-as-you-view concert The Stones are planning. For the ordinary user like you and me though, with bog standard Internet connections and not the direct pipelines on to the MBONE (a high-powered system that allows for fast video transfers), it was something of a let down. Not exactly bringing music to the masses, just to the very privileged few.

COMPUSERVE NEWS

The big daddy of on-line systems, CompuServe, has announced plans to bring the Internet to its members during 1995. Already CompuServe subscribers can send and receive Email, read Usenet News, but coming soon will be the ability to use the World Wide Web, FTP, Telnet and the rest. CompuServe are also writing their own World Wide Web browser, and informed me that the reason they are taking their time to introduce this increased-access service is so they can make everything graphical and very much point-and-click for their members.

Of course, this will be done by developing new versions of WinCIM and MacCIM, so once again Amiga users will find themselves left out. I know the future of Commodore is still in doubt, but there are so many Amiga users out in the big wide world that it really amazes me that so many on-line systems and service providers still choose to ignore them! Take a virtual raspberry for letting the side down, CompuServe.

WHO YOU GONNA CALL? NETBUSTERS!

I recently attended the second Annual General Meeting of CommUnity, the Computer Communicators' Association. This is the organisation that exists to help protect the rights of the people who use computer communications in the UK, as well as promoting Comms and cyberspace in general. The AGM was very poorly attended, the fact that it was a cold winter's evening in Stevenage might not have helped, but it struck me that this was a particularly poor show by the virtual community.

Come on, I know there are lots of you who care passionately about your Comms, so why aren't you supporting CommUnity? The association have a Fido echo, a Usenet newsgroup, a CiX conference, a mailing list, and even an electronic newsletter. If you want to find out more, and I urge you to do so, then write to CommUnity, 7 Primrose Road, Halton, Leeds LS15 7RS.

Alternatively you can join the uk.org.community Usenet Newsgroup, or contact them by Email at community@arkham.demon.co.uk. CommUnity costs just £5.00 per year to join (with a voluntary donation of a further £5.00 requested if you are in full-time employment).

CommUnity is concerned with promoting greater access to cyberspace, protecting the rights of people using computer-based communications, and preventing misrepresentation of the on-line community. If you care about your Comms, if you are interested in protecting your Internet, then you really should be supporting them.

LATE NEWS

As I go to press news has come in of a very snazzy Internet Relay Chat (IRC) Client for the Amiga. Going by the name of Grapevine it runs on machines using Workbench 3.0 or above and AmiTCP. Grapevine offers a graphical interface approach to IRC, and I have had some very good reports from people who have used it to get onto the IRC. You can get hold of a copy *now* by FTP from any Aminet site, such as wuarchive.wustl.edu.

SHAMELESS PLUG!

My new book, *All You Need To Know About The Internet*, is available now from Future Publishing. It costs just £14.95 and includes special offers from many of the UK's leading on-line systems and Internet access providers. If *Internet, Modems, And The Whole Comms Thing* got you interested in the Net then the new book is just the ticket to take you further on your travels. Oh, and I've got a wife and kids to support as well. Honest Injun! *(White man speak with forked tounge -Ed)* AS

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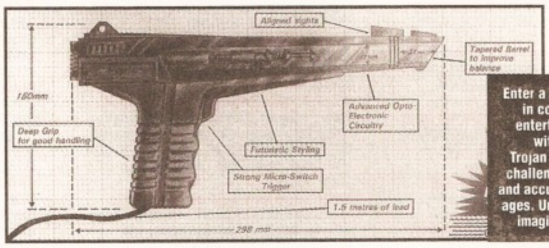
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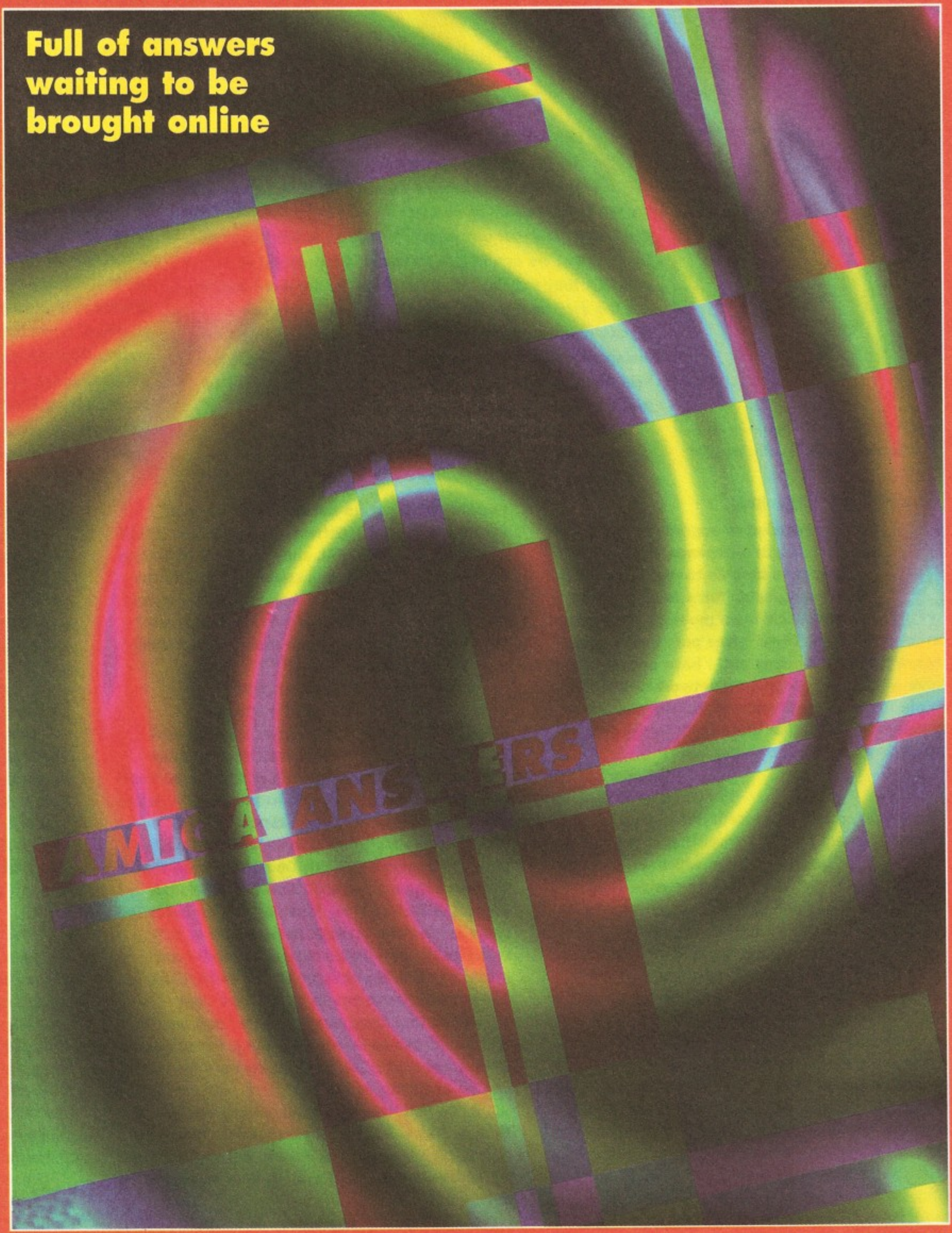
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CONTENTS AT-A-GLANCE

OUR EXPERTS HAVE THE ANSWERS TO YOUR AMIGA QUESTIONS



What is Amiga Answers?

Do you have a problem with your Amiga? Is something on your Amiga not working the way it should?In this section of Amiga Shopper we answer questions posed by you, our readers. All you need to do is to fill out the form on page 48 and we'll set our team of experts onto the case...

USING THE ICONS TO FIND WHAT A QUESTION'S ABOUT



Beginner questions raising basic problems.



General Amiga-related queries or questions.



Queries related to Amiga desktop publishing.



Questions about monitors and TV displays.



Queries relating to general hardware problems.



Questions asking for buying advice in any area.



Printers, drivers and hardcopy problems.



Coding problems (no matter which language).



Queries about using your Amiga with video.



MIDI, sampling, software and synths.



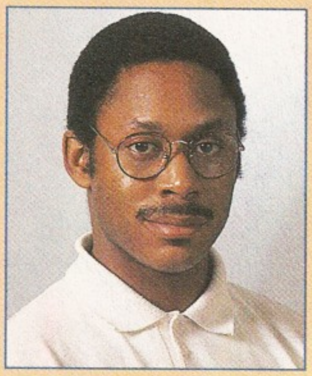
Software packages and programs queries.



Questions relating to comms, including modem.

AMIGA ANSWERS

NO PROBLEM!



Graeme knows it all... nearly!

Hello and welcome once again, to the area of *Amiga Shopper* where you can turn to find all the answers to questions concerning your Amiga. It's my privilege, as *Amiga Shopper's* technical writer, to make sure that not one of your problems is left unsolved. Don't worry, we can help – no matter how simple or complex they may be. At *Amiga Shopper* we want you to get the very best out of your Amiga. That's why we devote more space than any other magazine to this indispensable service, so please make the most of it and keep your questions coming in. We'll do my very best to find a solution to all your problems.

Don't worry if you come across any unfamiliar terms, just turn to one of our jargon-busting boxes to receive an explanation. The problems are put in a wide context for everybody's benefit. The index on the previous page is your guide to the topics covered this month.

By now, you are probably familiar with our team of Amiga experts. **Mark Smiddy** knows all there is to know about AmigaDOS and floppy drives. **Jeff Walker** is our desktop publishing, fonts and printer correspondent. **Gary Whiteley**, is a trusted expert on video applications and graphics. If you have a query about comms, we'll set our communications guru **Dave Winder** on the case. **Toby Simpson** is our code clinician. If you've got problems with anything from C to assembler, try taxing his little grey cells. Finally, we've got a man you can rely on when it comes to operating systems programming – **Paul Overaa**.

PRINT TO PC



My decision to upgrade to Wordworth 3 depends on your reply. I want to be able to use pictures and Compugraphic fonts in a document. While this is no problem, printing out on my dot-matrix printer gives poor quality and wears the printer ribbon out. I have access to a laser printer at college on a network of PCs.

Is there a way of transferring the document exactly as prepared in Wordworth to the PC which I can then print on the laser?

Thomas Clifford
University of Greenwich

Very simple. In the Wordworth Print Setup requester select a printer driver that is compatible with the college's laser printer, which will probably be HP_LaserJet but you'll have to check. Then double-click the Workbench CMD command, which you'll find in your Tools drawer, and print your document. This will write a file to RAM: named CMD_File. It contains all the necessary printer codes to image the document on the printer and is totally platform independent.

Copy this file from RAM: on to a MS-DOS formatted disk. If the file is too large to fit on a disk then you will have to print the document in pages and copy the files to several disks. Check out page 10-14 of your Workbench manual for full instructions on how to use CMD, and Chapter 7 for instructions on using CrossDos to prepare MS-DOS formatted disks. (You didn't say, but as you are interested in Wordworth 3 I am assuming you are using Workbench 3.)

Take the files to college and send them directly to the laser printer via the PC's parallel port. Keep in mind that you don't want to print the file on the PC in the normal way, it must be sent directly to the printer via the parallel port, bypassing any PC printer drivers. ***Jeff***

TELL ME MORE



I currently own an Amiga 1200 with 2+8Mb RAM, 120Mb IDE drive and a GVP 50MHz '030/882 accelerator. I am mainly interested in 3D animations so I have some relevant questions for you to answer which have been niggling me for some time.

1. If you set up a CD32 with an SX-1 module, 8Mb RAM, large IDE drive, FMV cartridge, keyboard, mouse, disk drive etc would it be possible to generate hundreds of frames of animation in, say, Lightwave or Imagine in 24-bit hires lace overscan PAL and then convert all the frames to one MPEG file, spool that file off the hard disk through the FMV cartridge and watch the animation in all its glory at full frame rate? Would it also be possible to record it in S-Video from the outputs on the CD32?

2. Can you recommend a good value for money 24-bit graphics card? I am mainly interested in either the Picasso II or the EGS Spectrum because of their cost and apparent compatibility with Workbench applications. Could you please shed some light on the capabilities of these types of card? For instance the EGS Spectrum claims to be able to move 80 million pixels per second in 8-bit. Does this mean that it will move approximately 25 million pixels per second in 24-bit? If so, is it possible to actually show animations through these cards or is it solely to do with faster screen update? I am pretty much in the dark as far as 24-bit cards go, never having seen one in action, but I am convinced that they must do more than display 24-bit pictures to justify their cost, especially when I see that a 24-bit graphics card for the PC can be as cheap as £60.

3. Do you know if anyone is planning a Bodega Bay / A1500-type expansion kit for the A1200? If so, could you tell me if the slots would be 32-bit wide Zorro III and perform as an A4000 do?

I would greatly appreciate as much information as you can give me on the above subjects as I am tired of being limited to a certain size of animation on my A1200. Anything over 320 x 256 in HAM8 and it starts to struggle!

Robert Atkinson
Dewsbury, W.Yorks

Curious chap aren't you, Robert? I'll do what I can to help, though I think that most of your questions come as a result of expecting to get more out of your A1200 than it could reasonably be expected to provide. Every machine has its limits, and it looks like your Amiga has reached them.

I'll answer your third question first, as the answer to your second question depends on whether such an expansion box exists or not, since there are no 24-bit cards which will fit directly into an A1200, all requiring either a Zorro slot or video slot to operate – hence your need for big box specification from your small box Amiga.

There is, apparently, a company in Germany which makes tower-style expansion cases for the A1200 (and all other Amigas except the A1000) but its slots are ZII, not ZIII. It seems that the case contains four ZII slots and two 16-bit PC ISA slots (though these overlap the ZII slots so it's one or the other if you've got PC-stuff to add as well), but no video slot. I've heard that the cost is around £320, by the way.

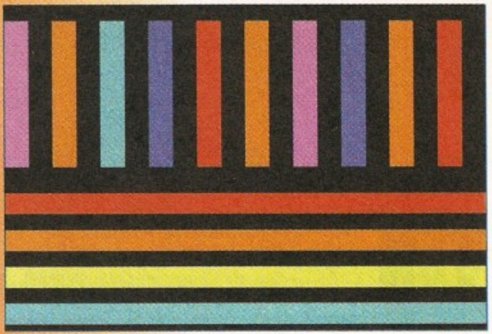
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(Thanks to shiuk@cix for making these details public).

Which moves us on nicely to your second question, regarding 24-bit cards. In this case ones which will fit into Zorro II slots, as both your chosen options (EGS Spectrum and Picasso II) certainly do. Both cards will allow most programs to be displayed on a 256 colour workbench-style screen at higher resolutions than a standard Amiga RGB video output can produce, but to reap the full benefit of these potentially pin-sharp images you'll need to employ the services of a multisync monitor.

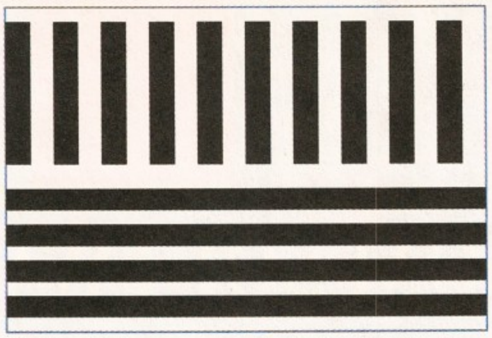
However, you'll still be able to display all your programs (and images, including 24-bit files) on a standard RGB monitor, though you won't get the benefits of the flickerless higher sync rates.

As for animation playback, sure these cards can employ software to enable this, but don't get your hopes up that you'll have an instant broadcast TV box if you fit a 24-bit card to your Amiga, no matter what pixel-shifting speeds the cards claim per second. Just stop to think a moment. A 768 x 576 pixel 24-bit image (that's full PAL overscan) contains 442368 pixels.

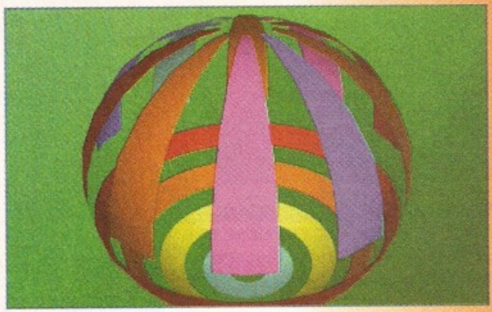
Twenty-five of these images make up one second of PAL animation, so that's over 11 million pixels per second that have to be shifted. OK, so the card might be able to handle it, but can your Amiga hardware load image data at such a high rate – which will probably be 15-25Mb (or more) per second? Of course not. So there has to be a compromise – and that's to either reduce the amount of colours or to reduce the size of the animated image.



Here's the Colour Map image...



And here's the corresponding Filter Map image...



Put 'em on your sphere, render, and Hey Presto – a see-through pattern!

To give you an example – I have an OpalVision card in my 40MHz '030 Amiga 2000, along with 360Mb of SCSI hard drives and 12Mb of memory. OpalVision has an excellent 24-bit animation compiler, but it is limited to lo-res overscan maximum and for good reason. The OpalVision just cannot shift data fast enough, even from RAM, to provide real-time playback of anything even approaching this size. So I usually do 160 x 128 tests and then record the full images to PAR or video tape. I suspect the same is probably true of other cards.

Unlike cheap PC cards, Amiga 24-bit cards allow direct access for painting or other graphics functions. The bottom-end PC cards are for display only, meaning that you can't directly see what you're painting at it's full quality, rather like doing a 24-bit background with Art Department and only being able to display it in 16 colours on a WB2 Amiga.

In any case, either of your chosen 24-bit cards would be fine, provided that you had somewhere to plug them into, of course, though I've seen more positive feedback on the Picasso than I have on the Spectrum.

And finally, to your first question. In theory what you propose should be possible, though you won't need the 8Mb of RAM as the FMV module will run quite happily with a standard CD^{32}. You will, however, need a way to MPEG encode the huge amount of data you are proposing to generate, and a place to store the data before you encode it – like a humongously-large (let's say several Gb) hard drive.

Currently the only seriously worthwhile Amiga hardware method for MPEGing is via the Peggy card, though there are several PC MPEG coders available. You'll also need to have plenty of patience whilst the MPEG file is crunched and saved! ***Gary***

BETTER LATE THAN NEVER!

Using either Imagine 2.0 or Imagine 2.9 I cannot seem to achieve a fully transparent sphere. If I render a white sphere against a blue background and set the sphere's colour filter settings to full value (255,255,255) I cannot see the background through the sphere. In practice I can see *into* the sphere but not *out* of it.

What I'm really trying to do is to make a rotating globe somewhat reminiscent of the old BBC1 world, but substituting clouds for the land masses. However, I can't seem to get it working at all right. Can you help?

Michael Harvey
Southwold, Suffolk

What you need to do here is use a Filter map as well as a Colour map on the surface of your sphere. Setting the colour filter only makes the sphere itself transparent – it doesn't affect how a mapped image filters light.

I've provided three example images to give you a better idea. The first is just to demonstrate how the mapping works (in your case it would be your clouds image). Only the coloured areas will remain visible on the surface of the sphere, made possible by using a modified version of this image as a Filter map.

I used Deluxe Paint to make the images, first the colour map version (in 16 colour 640 x 512) and then, by reducing the palette to two colours, I made all the parts I wanted to be transparent full white and the rest solid black. This two colour

THE SPONG ANSWERS

Amiga Shopper now has a section on Son of Spong!, the Future Publishing Amiga bulletin board. From here, you can ask technical questions of a real bunch of experts – the readers of Amiga Shopper. Here's a selection of a few of the latest questions and answers which have popped up on the bulletin board:

Can anyone help me? I need to know whether the new Zappo drive from ZCL works with the Viper accelerator from Power, various people have told me various things and I am getting *very* confused. Any kind of response would be a bonus.

Mark Gash

I am thinking of purchasing a Zappo (Overdrive) CD Rom but want to know if there are any compatibility problems with the above Blizzard board (I've got 4 Megs of Fast RAM). I've heard of some other boards having problems with CD ROM drives, but I think it's only the ones based around the 68020 processor and the problem lies with the memory addressing and the way the Amiga auto configures itself.

Am I right?

Am I talking nonsense?

Answers on a postcard please...

Kevin Morgan

For loading and playing games on the Zappo Drive fast memory needs to be switched off and the software included with the drive allows you to do this on boot up so the drive should work with no problems.

Stewart McCullouch

I have a Blizzard 40MHz '030 + FPU and Archos CD-ROM drive (the same as Zappo) and I can vouch for the fact that they work together.

However, my CD-ROM drive has broken a wire where the lead connects to the PCMCIA card and I am having to return it to the dealer :(

Derek Sharp

I want to add a hard drive via the SCSI interface on my A590 which as far as I know is a SCSI-1 interface. Can this interface support anyone other than a SCSI-1 device? So far advice from dealers and echomail has been conflicting, ranging from NO to YES, with maybe in between! I would like to use a SCSI-2 disk so that I can use it when I upgrade my Amiga from and A500.

Stuart Munro

I have an A590 and can vouch for the fact that it will work with SCSI drives. I also believe it will work with SCSI2, simply ignoring the extra features/speed.

Derek Sharp

Well I've got my answer about the Blizzard board & a CD Rom drive, I think I'll push my luck and ask another...

I'm looking to buy the above monitor (or something similar) coz I've only got a Commodore 1084S and I want the extra screen modes. However I've heard a few people mention that you can get horizontal banding of the picture when using certain screen modes with the Microvitec.

Is this true? If so, which monitor could you recommend?

What is the Microvitec like? (I know it's had good reviews, but what do the owners think of it?)

Kevin Morgan

I've had mine for a couple of months and have had no probs. The picture is crisp and clear. You could do much worse.

Andy Small

Well, I've got the 1440, but yours should be similar. I find the screen quality to be very good, although the DBLPAL mode is a bit of a strain on the eyes (that's why I use multiscan!). Workbench has to be seen in 800x600 before you can say it looks nowhere near as good as Windoze. I think it's a great monitor, and would definitely advise you to buy one (and I've got no problems with banding!)

Ignacy Sawicki

The Amiga Shopper section of the Metnet Bulletin board can be contacted by modem on 01482 473871/01482 442251.

Alternatively, you can E-Mail your queries to 2:2502/129.1 (Fidonet) or Answers@Amshop.demon.co.uk (Internet).

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image will be the Filter map.

Back in Imagine, load your sphere and first add the full colour image as a colour brush map, wrapped on both the X and Z axes. Then add the second image, again as an X and Z wrapped brush map, but this time make sure that the Filter box is checked.

Save the object, set up your scene in the Stage and Action Editors (I've added a graduated background for effect) and render at the size of your choice. And you should get results similar to those you can see here – at least in terms of transparency. ***Gary***

EXPANDED HORIZONS

BUYING

In 1992 I purchased an Amiga 2000 whilst at Liverpool University through a student loan scheme on the advice of a lecturer who recommended the computer for my main subject of Marketing.

However, since purchasing the Amiga I have had many problems both in finding local Amiga dealers and in gaining information regarding the Amiga itself. I have written to various companies but have received no replies.

Since graduating last May I have been offered a freelance job with a local company. This would entail me working with videos/photos of individual musicians and bands and designing posters, leaflets etc for promotional purposes.

The only software I have (in addition to the AmigaDOS 1.3 system software which came with the Amiga) is Kindwords 3, which I cannot use! My Amiga is only a 1Mb machine and I've hardly used it since buying it as my marketing option was terminated soon after I started it!

I basically need some advice of what I need to buy to get my Amiga working to its full potential instead of just gathering dust as it has been for the last two years.

Could you also tell me how I go about subscribing to Amiga Shopper.

Simon Connor
Bootle, Merseyside

I hope you're sitting comfortably, Simon, because you might be rather shocked when you work out the cost of all the things you're going to need to get your Amiga dream off the ground! In fact, once you've read what I have to say you might be better off considering buying another computer altogether because in the long run it may well suit you better, but here goes anyway....

Since you mention both videos and photos then the first thing you're going to need is a way of capturing and converting images from either of these sources into a form which can be used by your computer. To capture photos the best choice is a flat-bed scanner, such as those produced by Epson or Sharp. Typically, a good scanner will cost more than £500, and you'll also need to add more for software capable of driving the scanner.

To grab video images you'll need a real-time video digitiser or framegrabber, such as Rombo's Vidi-Amiga 24RT or MacroSystem's VLab card. You'll also need a video source suitable for playing back the band's videotapes.

To handle such images your Amiga is going to require both increased disk capacity and memory, so you'll need a large(ish) hard drive, hard drive controller card and plenty of memory (at least 8Mb would be best). Also, an accelerated Amiga would speed up many of the production processes enormously. Fortunately it is possible to combine a SCSI hard drive controller, memory and accelerator all into one card, but expect to pay £700 or more for the privilege.

To transfer high quality images from your Amiga to a print bureau you'll probably need a PC-compatible high-density disk drive, such as those supplied by Power Computing. This will enable the bureau to load and print images you've prepared on your Amiga from their Macs or PCs. I'd also recommend that you upgrade your Workbench and Kickstart to version 3 (cost around £90).

To complete the hardware side you should have an RGB monitor to provide a good quality display. A 24-bit display card (such as Picasso, Opalvision or Retina) would also help, but isn't an absolute necessity unless you plan on doing a lot of fiddly image compositing.

So how about the software? The first thing you'll need is an image processing program like ImageFX or Art Department which will allow you to load your grabbed or scanned images and crop, scale and convert them into something suited to your needs, as well as output them to disk in a format suitable for a print bureau to use. Both Image FX and ADPro can be used to add text to an image, though you'll need to supply the fonts yourself. For laying out text or manipulating images by hand you could use a paint program such as Brilliance (though ImageFX also includes a range of paint tools) but for heavy-duty paint work at the highest quality then only a 24-bit display and paint program like TVPaint, OpalPaint or Photogenics will do the business. I guess we've spent over a couple of thousand pounds already!

You'll probably also require a desktop publishing program, so that you can combine your text and images together more stylishly. Unfortunately, whilst there are several suitable programs for the Amiga, there's not much progress going on with them except for Soft Logik's PageStream3 software. Older programs like Gold Disk's Professional Page will get the job done, but Gold Disk are no longer supporting the Amiga, so don't expect any help when things go wrong.

If you are to be producing promotional material then we should assume that it has to be top-class, glossy quality. A simple dot-matrix printout isn't going to impress potential audiences and clients much, unless such a design is actually suitable for the job in hand.

Therefore, as far as quality printing goes, you may well be better off getting your materials printed out professionally. Most of your local copy shops (for example KallKwik or Jiffy Print) will be able to supply quotes for this, though it may take a bit of persuasion for you to supply elements of your artwork on PC disks for them.

You'll have to enquire as to the image formats they'll require for compatibility with their equipment. For proofing a good inkjet printer (such as a Canon BJ or Hewlett Packard Deskjet) or a laser printer will do the job, and you'll even be able to use some of the printed output directly, though prints from grabs and scans aren't usually very successful with such printers, particularly lasers.

To be honest it might be an idea to consider having a look at PCs and Macs as well. Don't expect to save much money though – PC and Mac hardware might come in cheaper than an equivalent Amiga but some of the software is far more expensive. In the end it's swings and roundabouts, but if it's DTP you want, and you're not too worried about whether it's on an Amiga or not, I'd take a look at the other machines too, and then make your choice. I wish you the best of luck as a freelance, but don't expect for a minute that it will be easy!

You can subscribe to Amiga Shopper by writing to the subscriptions dept at Amiga Shopper subscriptions, Future Publishing, FREEPOST, Somerton, Somerset TA11 6BR or calling them on 0225 822511. A year's subscription costs £30. ***Gary***

PROPAGE POSERS

DTP

I have a few questions regarding ProPage 4.1, ProSpool and Compugraphic fonts. Firstly, even though I have an 030 accelerator fitted to my A500 (running Kickstart 2.04 and Workbench 2.1), each page takes about seven minutes to print on my Canon BJC-600 using the best quality print setting from ProPage. Why, and how can I speed it up?

I recently upgraded from ProPage 2 to 4.1. I only got a manual for ProPage 2, with a version 4 supplement manual. Is this correct? I read in this update manual that I should be able to redirect printing to a file, which ProSpool should print. I cannot find a requester in the file print section to redirect output to a file. How do I do this? Will it be any quicker?

I have a CD-ROM full of Compugraphic fonts. To make them work with ProPage I have to manually change the filename extensions from fontname.DAT to fontname.dat, fontname.LIB to fontname.lib, and so on. Can you help me with a script to do this automatically?

What is the difference between Workbench Compugraphic fonts and the fonts used by ProPage? Can you make each type work with each program?

How does the FontManager program work? Can I get it to change all my Compugraphic files to the 030 version, or is it only for Adobe fonts?

Finally, how can I get ProPage to recognise a separate directory for decorative fonts, small fonts and large fonts? It really is a pain waiting for it to read a directory of 100 fonts.

R T Butler
St Lawrence, Jersey

Seven minutes for an A4 colour print-out at top resolution is about par for the course for a 68030 CPU. The only way to make it happen significantly faster is to throw a more powerful CPU at the problem. This has got stuff all to do with the Amiga or ProPage, it is simply how long it takes to print graphics on this type of printer.

First, four strips of the 360 dpi page must be created in memory (one strip each for the cyan, magenta, yellow and black colours), then that data must be sent to the printer down the parallel port eight bits at a time, then the printer has to print it. Then the next strip is imaged and sent to the printer, then the next strip.... and so on until the page is completely printed. What takes the most time is the initial imaging of each strip in memory, and how quickly this happens is dictated by the speed of the CPU.

ProSpool is for use with PostScript printers only. If you want to spool your preferences printer output you can use the CMD command and then Copy the resulting file to the PAR: device (not PRT:). See page 10-15 of your Workbench 2.1 manual for simple instructions on how to use CMD. Alternatively, if you want a fancy user interface for this job, get hold of the excellent PrintManager 2 shareware program. Any PD library should be able to help you there. Printing in this

way will not speed up printouts by very much (perhaps a few seconds), but it does produce better printouts, particularly on inkjet (bubble jet, DeskJet) printers.

Your renaming problem can also be solved by a PD program. The standard AmigaDos Rename command doesn't allow wildcards, so a chap called Marc Mendez wrote a program called Aren that does. I downloaded it from Aminet (util/cli/Aren.lha) but any decent PD library should again be able to help you if you don't have access to Internet. With Aren in your C: directory, this would be the script to execute:

```
cd CGFonts:
aren DAT dat #?DAT
aren LIB lib #?LIB
aren METRIC metric #?METRIC
```

However, having provided that solution, I'm rather puzzled by what you want to do because ProPage doesn't care whether the font filename extensions are in upper case, lower case or in a mixture of cases. Perhaps you are just assuming they need to be in lower case because the others already are? Or perhaps you just want to be neat? Anyway, whatever the reason, Aren is the simple solution.

The Workbench Compugraphic font system is a little limited for professional desktop publishing use, so some programs employ their own, separate systems for dealing with Compugraphic fonts. The fonts themselves are exactly the same, it is the way the programs handle them that is different – things like kerning and character widths and spacing, which are not important to most users but very important to desktop publishers. The upshot is that ProPage cannot use Compugraphic fonts that have been installed for use by Workbench.

However, you can use Compugraphic fonts that have been installed for ProPage (in CGFonts: that is) with other Workbench programs. To do this you need to use the Workbench Intellifont or Fountain program. After running Intellifont or Fountain, press the Help key and you will be given full instructions on how to use it. Just make your CGFonts: directory the Outline Font Source and follow the instructions on the Help key.

ProPage's FontManager is used solely for converting PostScript Type 1 fonts into Compugraphic fonts for use with ProPage, ProDraw and PageSetter[3]. There is no such thing as an 030 version of a Compugraphic font and I am not sure where you've got this idea from. To use FontManager you simply select the Type 1 fontname.PFB file(s) in the left window, set it off, and it converts them to Compugraphic and puts them in the directory listed in the right window, which by default is the CGFonts: directory.

All ProPage's Compugraphic fonts must be in the one CGFonts: directory. Sadly, there is no way at all to sort your fonts into directories and have ProPage read all those directories. Even if you did, can you see that it would still have to read your 100 fonts, except they'd be in different directories?

The way I work is by having a storage directory of fonts, inside which all my fonts are sorted into different categories in different directories. Before running ProPage I decide which fonts I am going to use, then I copy those into CGFonts: (joining the small bunch of fonts I use regularly), run the CG_Update program to update the fonts list, then run ProPage and get on with my work.

When I've finished with the new fonts I delete them from CGFonts: and run CG_Update again. Remember that these fonts will always have to be in CGFonts: (and the fonts list updated) whenever the document that uses them is loaded. I always attach a Post-It note to the first page of my documents listing all the fonts used in that document. Then I check the list in the Type/Typeface submenu – if any fonts on my Post-It note are missing from that list I know that I have forgotten to copy them into CGFonts: and/or run CG_Update to update the fonts list.

By the way, if you never use bitmapped fonts, make sure your ProPage icon ToolType FONTS is set to just CG (FONTS=CG rather than FONTS=ALL). This will prevent ProPage trundling off to read your FONTS: directory, which can take some time if it contains many fonts. ***Jeff*** AS

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A1500 ❑ **A2000** ❑ **A3000** ❑ **A4000** ❑

Approximate age of machine:__________

Kickstart version (displayed at the "insert Workbench" prompt)

1.2 ❑ **1.3** ❑ **2.x** ❑ **3.x** ❑

Workbench revision (written on the Workbench disk)

1.2 ❑ **1.3** ❑ **1.3.2** ❑ **2.04/2.05** ❑ **2.1** ❑ **3.0** ❑

PCB revision (if known). Do not take your machine apart just to look for this! __________

Total memory fitted (see AVAIL in Shell for Workbench 1.3) __________

Chip memory available (see AVAIL in Shell) __________

Agnus chip (if known) __________

Extra drive #1 (3.5in/5.25in) as DF__: Manufacturer __________

Extra drive #2 (3.5in/5.25in) as DF__: Manufacturer __________

Hard disk: ____Mb as DH__: Manufacturer __________

Extra RAM fitted – type, size in Mb and manufacturer __________

Details of any other hardware which could help us to answer your question:

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Now, use this space to describe your problem, including as much relevant information as possible. Please continue on a separate sheet if necessary.

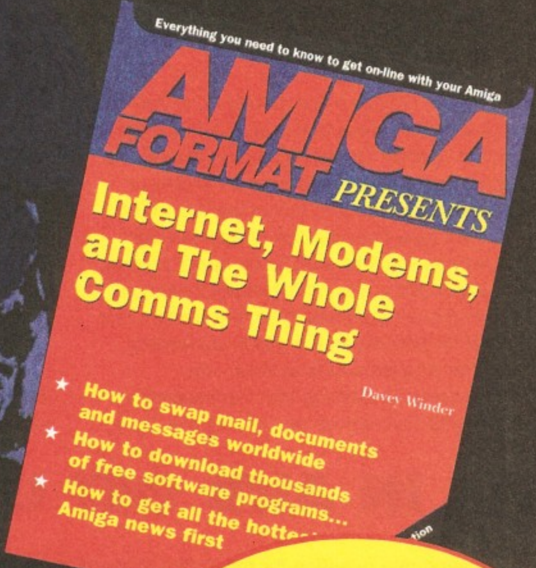
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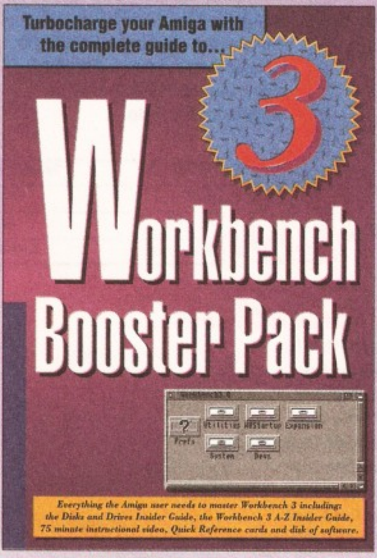
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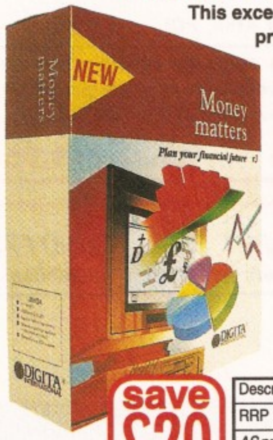
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Wordworth 2

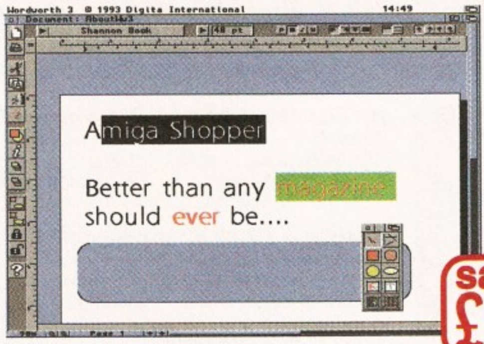


Although it has now been overtaken by *Wordworth 3*, this is still an excellent word processing program, especially at this price. *Wordworth 2* from Digita is a powerful, fast and packed with features such as Intellifont, which enables you to use fonts from 4 to 800 points in size, mail merging, a large dictionary and thesaurus, and an indexing system. An extremely powerful, flexible program which will suit nearly every Amiga user.

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Description	Wordworth 2
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Wordworth 3



The third incarnation of this excellent Amiga word processor adds a compendious range of new features, including editable pop up gadgets, font sensitive requesters and a user editable tool bar which can be placed either along the top of the screen or the side.

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Description	Wordworth 3
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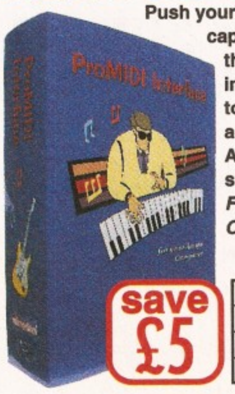


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Like the original *Technosound Turbo*, version two of this sampler from New Dimensions enables you to grab digitised sounds and sequence them into compositions. But it also features many improvements and new functions, including direct-to-hard disk recording, and a built-in tracker. The package contains a digitiser and a set of audio leads.

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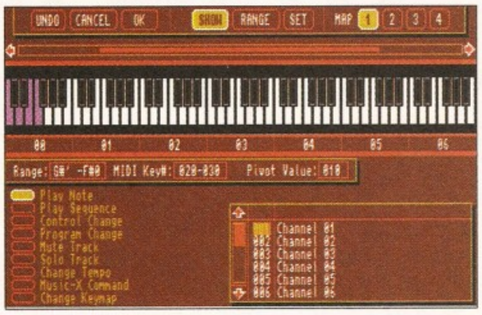


This amazing fractal landscape program from Meridian enables you to build your own scenery on your Amiga. Then you can animate it to create stunning fly-bys, or use it as backgrounds in your own games, pictures or 3D renders. And it even works on standard A1200s.

save £20

Description	Vista Pro Lite
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Music-X 2

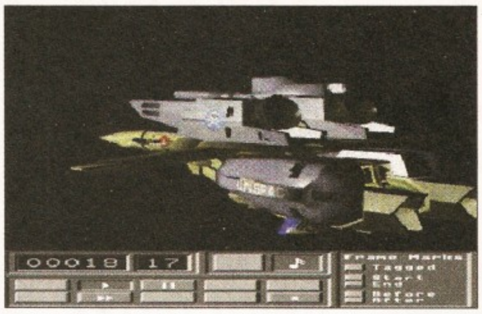


This sequencer package is one of the most ground-breaking releases since the original *Music-X* made such a huge impact in 1989. *Music-X 2* is a full MIDI sequencing package for controlling synthesisers, drum machines and other MIDI equipment, or you can use it with internal Amiga samples.

save £30

Description	Music-X 2
RRP	£149
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Order code	AMSMX2

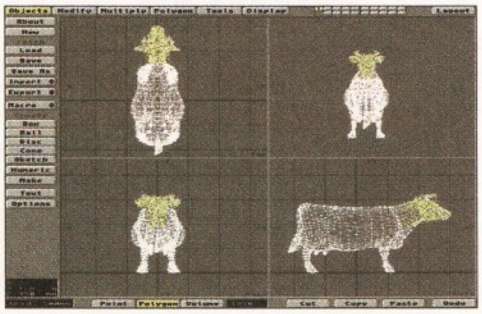
Anim Workshop v2



Fancy being able to combine animations? How about adding sound to your latest epic intergalactic space battle animation? Anim workshop can do all of this, and more. It also boasts a comprehensive ARexx interface, so you can even write your own scripts to process animations.

Description	Anim Workshop V2
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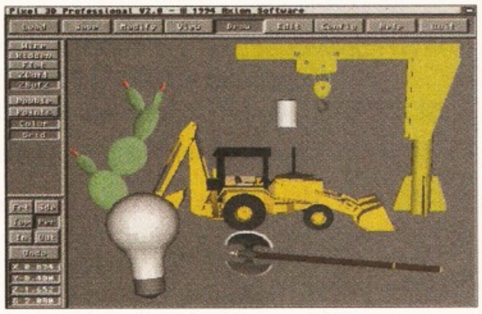
WaveLink



Fancy doubling the speed of your LightWave renders? If you have two Video Toaster equipped Amigas, this product will allow you to cut your rendering times in half by splitting each frame between the two machines. All you need to do is click on the "Render" button!

Description	WaveLink
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Get the max

Learn how to write your own chess program in C or AMOS. Cliff Ramshaw introduces the first fully working version.

This is it – after following this month's instalment you'll finally be able to play a game of chess against your Amiga. There's only one more function that we need to implement – everything else is already in place. That function is bestmove(), the most important and also the trickiest of the program's functions. Let's get cracking....

If we wanted the computer to play like an imbecile, then we could use the simple strategy of finding a move, making it, evaluating it and taking it back, for each legal move available to the computer in a given position.

The moves could be found with calls to findmove() for each of the computer's pieces and each possible direction, and each move could be assigned a score by a call to evaluate() after it had been made. After each move had been tested we would then pick the one with the highest score.

The problem here is that the computer can't see the consequences of the moves – it will simply take the most valuable piece in its path, without the intelligence to even maneuver itself into positions to do so or to avoid the most elementary sacrificial ploys on behalf of the human.

It needs to be able to look ahead, to guess what the player's response to its move might be, to see how it would best respond to that, how the player would respond again, and so on. The further ahead it looks, the better it plays.

The number of moves a chess program looks ahead is known as the number of ply. Strictly speaking, one ply corresponds to a half move – a move by either black or white. A full move consists of a play by white and response from black.

Searching through these moves produces what is known as a 'tree'. Each of the moves available to the computer can be represented diagrammatically as branches emanating from a single route. Each move leaves the human with a number of possible responses, and these are represented as further branches spreading from the computer-move branches. The diagram extends for as many ply as are being searched. As you can see, the number of possibilities dramatically increases at every new level of ply.

In theory, we could get a program to look ahead until the end of the game, evaluating every move and every consequence until checkmate or stalemate. It would be unbeatable. At current levels of computing power, the sun will have long shrunk to a white dwarf before a program can do this, so compromise is in order.

On my humble A1200, I find 3-ply look ahead (that's one move for the computer, the player's response and the computer's response to that) plays at an acceptable speed. If you've got a 68040-based machine, you can probably push it up to 5-ply. If you've got a 68000-based machine, you'll have to be patient, because the game isn't really worth playing below 3-ply.

So how do we get the function to look ahead? If you've been observant, you'll have noticed that the findmove() function operates on both black and white pieces.

In other words, it can find legal moves for both the computer and the human player (we've already made use of this facility in the humanmove() function). With findmove()'s help, the computer can make moves on behalf of the player as well as itself.

The basic strategy, then, is to make each legal move in turn. Instead of evaluating this move, we look at the human's possible responses to it. This is searching at 2-ply.

Instead of evaluating any of these responses, the computer again considers its own position and looks at the responses it can give to each of the player's responses. This is 3-ply.

This process continues until the maximum ply, as specified by the player at the beginning of the game, is reached, at which point the board

C CODE LISTING

The symbol ☛ means do not type a return – keep typing to the end of the next line. ▼☛ means type a space, then keep typing to the end of the next line.

```
/* best move creates each move in turn and evaluates it */
struct move bestmove(int player, int level, int maxply)
{
      struct move current;
      struct move bestsofar;
      struct move opponents;

      int x,y,maxdist,rotation,piece,taken;

      if (level<maxply) {

    /* recursive search */
    bestsofar.score=-99999;

    for (x=0;x<8;x++)
          for (y=0;y<8;y++) {
        /* work through each board position in turn */
        piece=board[x][y];
        if (piece*player>0) {

              /* if piece belongs to current player, move it */
              for (rotation=0;rotation<8;rotation++) {
              /* try each direction */
              current=findmove(piece,x,y,rotation);
              maxdist=current.distance;
              if (maxdist>0) {
                    for
(current.distance=1;current.distance<=maxdist;current.distance++) {
                /* work in this direction for as long as it is legal */
                /* avoid checking a king moving two places to the left */
                if ((piece==6 || piece==-6) && rotation==6 &&
current.distance==2)
                      current.distance=maxdist;

                taken=makemove(current); /* make the current move */
                opponents=bestmove(-player,level+1,maxply); /* find ☛
opponent's best response */

                erasemove(current,taken); /* take back move */
                current.score=-opponents.score;
                if (current.score>bestsofar.score) {

                      /* this move yields best score so far */
                      bestsofar=current; /* store move and its score */
                }

                  }
              }
            }
          }
        }
      }
    else {
    /* reached bottom of recursion */

    bestsofar.score=-99999;
    for (x=0;x<8;x++)
          for (y=0;y<8;y++) {

        /* work through each board position in turn */
        piece=board[x][y];
        if (piece*player>0) {

              /* if piece belongs to current player, move it */
              for (rotation=0;rotation<8;rotation++) {
            /* try each direction */
            current=findmove(piece,x,y,rotation);
            maxdist=current.distance;
            if (maxdist>0) {
```

is evaluated.

At the start of the game, there are 20 moves open to the computer (eight pawns can move one or two squares, and each of the knights can move in one of two directions). None of these moves restricts the human's freedom of movement, so each of the computers moves has 20 possible responses.

So a 2-ply check at the beginning of the game involves looking at 400 moves. The number of possible moves goes down as pieces are taken, but increases as queens, bishops and rooks gain freedom of movement, since these have many possible directions and distances open to them. As a very rough approximation, you could say that the speed of the game slows down by a factor of 20 for every extra ply searched.

Because of its repetitive nature, the bestmove() algorithm lends itself to the technique of recursion. The same function that searches for a move can be used to find a response to that move, and so on. To do this, bestmove() needs a parameter indicating on whose side it is playing.

Initially, this is 1, indicating the computer, but when it recursively calls itself this is multiplied by -1 to indicate that the function should search for the human's moves. Another recursive call results in the parameter being multiplied by -1 again, switching back to looking at moves available to the computer.

Recursive functions break down into two segments: the recursive part and the base case (see box-out). The recursive part here is the bit that makes each legal move in turn and then calls itself to find the responses.

Another of bestmove()'s parameters is the integer variable level, which begins at 1 and is increased by 1 every time the function is called recursively. Once the value of level reaches the maximum ply (specified by the integer parameter maxply), then the base case comes into operation.

The base case terminates the recursion and provides a means for the function to come back down to earth. Like its recursive counterpart, it makes each legal move for whichever side is specified by its player parameter. But instead of recursively calling itself once it has made the move, it calls evaluate() to find a score.

After it has checked all the possible moves at this level, it returns the one that yields the best score. In C this is done by returning a structure. In AMOS, which can't deal with structure types, the values of the BESTSOFAR array (equivalent to the bestsofar structure) are copied into the CURRENTMOVE array, which is globally available and can be seen by the calling program.

The base case works just the same as if the computer were only looking one ply ahead, by simply choosing the move that gives it the most material gain. Nice and simple. Notice, though, that it can operate just as well on behalf of the human player (which will only occur if you specify an even number of ply).

Let's return to the recursive case, and see how it deals with the score passed back to it. The first thing it does is to take back the move it has made. This is necessary because the board is global and we don't want it to be altered permanently until the computer has finally chosen a move.

It then assigns a score to the move it is considering by multiplying the score returned to it by -1. It's easiest if you think of the thing in two-ply. Imagine that the computer has just made the first of its available moves. It has then recursively called bestmove() which, now at the base case (level=2=maxply), picks the human's response that gives the best material advantage. The score of this is then returned to the recursive case (level=1).

This is where the minimax algorithm gets its name. The computer doesn't want to pick the highest scoring move (since that is the move that gives the opponent the best advantage), but rather the lowest scoring one. It picks the move that produces the weakest response from the opponent, even though the opponent is making the best response possible to that move. It is minimising the player's maximum response.

This is done by multiplying the score of the best response by -1, and assigning that score to the move currently under consideration. Once all the moves have been checked, the function then picks the one with the highest score (the lowest score, so far as the opponent is concerned), and returns that.

As you can see, the function can be called recursively many times. At each level, except the top, it picks the move that provides the opponent with the poorest opportunity to respond. The move that is finally returned to the calling function is the one that results in the best material advantage for the computer in a given number of moves time. It's interesting to note that the algorithm assumes that the human player is thinking the same way – ie, also employing the minimax algorithm.

If you look closely at this month's code you'll notice that the recursive part of the program is interested only in the score of the response to any of the moves it tries, not the locations moved from or to or the type of piece moved. It's only when the recursion finishes and the best move is returned to the calling program that its details are needed.

Aside from the points mentioned above, you should have no difficulty in following bestmove()'s code.

The code for the recursive and base cases is very similar. The structure bestsofar (array BESTSOFAR in AMOS) is used to hold the details of the best move discovered so far.

The currentmove structure (array CURRENTMOVE) holds in turn the details of every

```
            for
(current.distance=1;current.distance<=maxdist;current.distance++) {
            /* work in this direction for as long as it is legal */
            /* avoid checking a king moving two places to the left */
            if ((piece==6 || piece==-6) && rotation==6 && ☛
current.distance==2)
                current.distance=maxdist;

            taken=makemove(current); /* make the current move */
            current.score=evaluate(player); /* get a score for this ☛
move */
            erasemove(current,taken); /* take move back */

            if (current.score>bestsofar.score) {
                /* this move yields best score so far */
                bestsofar=current;
            }

              }
         }
           }
       }
         }

     }
     return bestsofar;
}
```

AMOS CODE

```
' BESTMOVE creates each move in turn and evaluates it
Procedure BESTMOVE[SIDE,LEVEL,PLYMAX]
Shared CURRENTMOVE()
Dim TEMP(7)
Dim BESTSOFAR(7)
If LEVEL<PLYMAX
   ' recursive search
  BESTSOFAR(5)=-99999
  For X=0 To 7
     For Y=0 To 7
        ' work through each board position in turn
        PIECE=BOARD(X,Y)
        If PIECE*SIDE>0
           ' if piece belongs to current side, then move it
           For ROTATION=0 To 7
              ' try each direction
              FINDMOVE[PIECE,X,Y,ROTATION]
              DISTMAX=CURRENTMOVE(4)
              If DISTMAX>0

                 For DIST=1 To DISTMAX

                    ' work in this direction for as long as it ☛
is legal
                    ' avoid checking for a king moving two ☛
places to the left
                    If(PIECE=6 or PIECE=-6) and ROTATION=6 and ☛
DIST=2
                       DIST=DISTMAX
                    End If
                    CURRENTMOVE(4)=DIST
                    MAKEMOVE
                    ' make the current move
                    TAKEN=Param
                    ' temporarily store parameters of move
                    For I=0 To 6
                       TEMP(I)=CURRENTMOVE(I)
                    Next I
                    BESTMOVE[-SIDE,LEVEL+1,PLYMAX]
                    ' find opponent's best response
                    ' update CURRENTMOVE to hold the move ☛
previously under consideration
                    ' but retaining the opponent's move's score
                    SCORE=CURRENTMOVE(5)
                    For I=0 To 6
```

move checked by the function. When currentmove is assigned a score, this score is compared with that of bestsofar. If it is bigger, then bestsofar is given the values of currentmove, thereby remembering a new best move.

When all the moves have been checked, bestsofar holds the details of the overall best. The structure called opponents (array TEMP in AMOS) is a temporary one used in the recursive case to hold the value returned by the recursive call to bestmove().

In both the recursive and base cases x and y loops are set up to search through every square on the board. A square is ignored unless the function finds a piece of the correct. It determines this by testing that the contents of the board square multiplied by the parameter player are greater than zero.

If a piece has been found, then another loop is entered, this time cycling through the eight possible directions. Calls to findmove() reveal how far, if at all, the piece can move in each of these directions. If the distance is greater than zero, then another loop is entered, this time counting between one and the maximum number of squares the piece can move along. Notice that the program avoids the special case of the king moving two squares to the left. This can occur if the king can castle to the left, when its maximum distance will be set to three. The nonsense value of two must be skipped when this happens.

Otherwise, the move is made and the value of the piece taken by it, if any, is stored in the variable taken. In the recursive case, a call is then made to bestmove(), with the result being placed in opponents (TEMP in AMOS). In the base case, the move is instead given a score by a call to evaluate. In both cases, the move is then taken back and its score compared to that of bestmove. If it is higher, bestmove is updated accordingly and the various loops close. Both cases end by returning bestsofar to whatever called them. Notice that in AMOS this involves the copying of the local BESTSOFAR array to the global CURRENTMOVE array.

And that's it. Enjoy your first game, and I'll be back next month to add some finishing touches to make the program's playing a bit more challenging. AS

WHAT IS RECURSION?

By recursion I mean recursion. Recursion is one of those techniques that often frightens unseasoned programmers. They assume it's horribly complicated, whereas in fact it's beautifully simple and damn useful.

Recursion, like the more familiar technique of iteration, is a means of carrying out the same or a similar task many times over.

Often you can use a straightforward iterative loop instead, but in some cases recursion provides the easiest way to code a solution. If you don't believe me, try re-writing this month's bestmove() procedure without it.

A recursive function is one that includes a function call to itself, which is the way that the repetition is generated.

It's possible for a function to do this without creating a horrible mess because the variables within a function are local to it.

If a function has a parameter n, then the value of n is quite independent of any variables called n outside of the function. Similarly, if that function calls itself, passing a different value for n, then the n in the recursively called function will be quite independent of the n in the calling function, and will not modify it in any way.

Once the recursively called function finishes, then control is returned to the calling function, just after the line that did the calling.

To prevent this resulting in an infinite loop, there needs to be a terminating condition that, when met, stops the recursion and causes the function to finish. With this in mind, it's easy to divide recursive functions into two parts – the recursive case and the base case.

The classic example (and who am I to break with tradition?) is that of the factorial. The factorial of a positive integer is defined as the result of multiplying all the integers between 1 and the number in question together.

The factorial of 1 is 1, of 2 is 2, of 3 is 6, of 4 is 24, and so on.

Notice that the factorial of a number bigger than 1 is the same as that number multiplied by the factorial of 1 less than that number, ie the factorial of 4 is the same as 4 times the factorial of 3.

Here's how you would write a recursive function to do this in C:

```
int factorial(int n)
{
   if (n==1)
      return n;
   else
      return n*factorial(n-
1);
}
```

The if (n==1) bit is checking for the base case.

If it's true, then there's no need for a recursive call and we return a value of 1 (the factorial of 1 is 1). Otherwise, we're in the recursive case.

The value returned is n multiplied by the factorial of n-1, which involves calling the function again, with a value of n-1 as parameter.

And that's all there is to it.

```
                        CURRENTMOVE(I)=TEMP(I)
                     Next I
                     BLANKMOVE[TAKEN]
                     ' take back move
                     CURRENTMOVE(5)=-SCORE
                     If CURRENTMOVE(5)>BESTSOFAR(5)
                        For I=0 To 6
                           BESTSOFAR(I)=CURRENTMOVE(I)
                        Next I
                        ' store move and· its score
                     End If
                  Next DIST
               End If
            Next ROTATION
         End If
      Next Y
   Next X

Else
   ' reached bottom of recursion
   BESTSOFAR(5)=-99999
   For X=0 To 7
      For Y=0 To 7
         ' work through each board position in turn
         PIECE=BOARD(X,Y)
         If PIECE*SIDE>0
            ' if piece belongs to current player then move it
            For ROTATION=0 To 7
               ' try each direction
               FINDMOVE[PIECE,X,Y,ROTATION]
               DISTMAX=CURRENTMOVE(4)
               If DISTMAX>0
                  For DIST=1 To DISTMAX
                     ' work in this direction for as long as it ☛
is legal
                     ' avoid checking for a king moving two places☛
to the left
                     If(PIECE=6 or PIECE=-6) and ROTATION=6 and ☛
DIST=2
                        DIST=DISTMAX
                     End If
                     CURRENTMOVE(4)=DIST
                     ' work in this direction for as long as it ☛
is legal

                     MAKEMOVE
                     ' make the current move
                     TAKEN=Param
                     EVALUATE[SIDE]
                     ' get a score for this move
                     CURRENTMOVE(5)=Param
                     BLANKMOVE[TAKEN]
                     ' take move back
                     If CURRENTMOVE(5)>BESTSOFAR(5)
                        ' this move yields best score so far
                        For I=0 To 6
                           BESTSOFAR(I)=CURRENTMOVE(I)
                        Next I
                     End If
                  Next DIST
               End If
            Next ROTATION
         End If
      Next Y
   Next X
End If
   ' We must preserve BESTSOFAR so
   ' that it can be passed back to the calling program. To do this,☛
it must
   ' be copied into the shared array CURRENTMOVE

   For I=0 To 6
      CURRENTMOVE(I)=BESTSOFAR(I)
   Next I

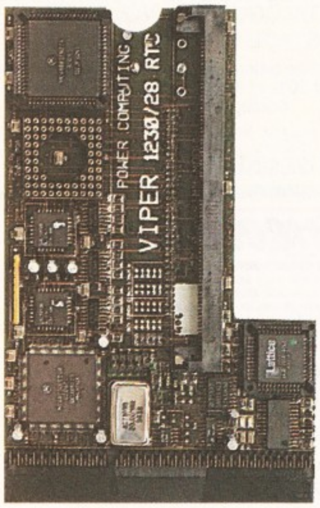
End Proc
```



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GAMES

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G395 **HELICOPTER MISSION** - Superb Desert strike clone. Three different helicopters, each with their own missions. Waming, all text is written in German.
G396 **PENGO 2** - Zip your Penguin buddy through the ice cave mazes squashing the baddies. Great fun.
G397-G398 (2 DISKS) **INTERNATIONAL WRESTLING CHAMPIONSHIP** - Fantastic wrestling game for one or two players. Slams, punches, shoulder blocks, elbows, jump's off the ring post and loads of other bone crunching moves.
G399 **DYNAMITE WARRIORS 2** - Incredible Dynablasters clone. 1 to 4 player addictive arcade action. Not to be missed.
G400-G405 (6 DISKS) **THE ART OF BREAKING HEADS** - Massive beat-em-up with a choice of different characters with different abilities and special moves. One amazing game. WB 3.0+ ONLY. REQUIRES AT LEAST ONE MEG OF EXTRA FAST RAM TO RUN PROPERLY.
G406 **COLONIAL CONQUEST II** - Takes elements from Microprose's Civilization and implements them into this interplanetary strategy game of evolution and survival. NOT WB 1.3. REQUIRES 2 MEG.
G407 **X-MEN CARDS** - Cardset for Klondike Deluxe. A1200 ONLY.
G408 **TEAM TETRIS** - New Tetris variation that is played by two players at the same time. Requires cooperation between players.
G409 **AMBASSADOR FRUIT MACHINE V2.0** - Superb fruit machine game with all the bells and whistles you'll see in a modern day arcade. WB 3.0 ONLY.
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G414 **EMPIRE STRIKES BACK CARDS** - Cardset for Klondike Deluxe II and III.
G415 **RETURN OF THE JEDI CARDS** - Cardset for Klondike Deluxe II & III.
G416 **DR WHO CARDS** - Cardset for Klondike Deluxe II and III. Due the size of the cardset it has been archived with LHA. You will have to sort this out for yourself.
G417 **FAST CARS CARDS** - Cardset for Klondike Deluxe II & III.
G418 **PINGWYNNE** - Arcade Penguin game with digitised speech samples of Graemme Taylor!!!!!!!!!
G300 **VCHESS v3.1** - One of the strongest computer Chess games around, with more extra features than most commercial ones. NOT WB 1.3.
G419-G420 (2 DISKS) **STARWOIDS** - Inspired by the game Thrust and the Star Wars film trilogy, this is a real hot looking shareware game. Recently reviewed (and highly rated) in AF. WB 3.0+ ONLY.
G421 **TOP HAT WILLY** - Remember Jet Set Willy on the old 8 bit computers, well this platform game is based on that classic.
G322 **AUTO MOBILES** V1.11 - New release of this Skid Marks type racing game. More tracks, improved car control and loads of other improvements. Brilliant graphics.
G366 **ELLE McPHERSON CARDSET** - Cards for Klondike Deluxe AGA.
G371 **SUPER OBLITERATION** - Amazing Pang clone. Top game. Recently reviewed in Amiga Format.
G361-G364 (4 DISKS) **SPECTRUM GAMES 1-4** - Games for the Spectrum emulator.
G373-G378 (6 DISKS) **SPECTRUM GAMES 6-10** - More game for the Spectrum emulator.
G283-G285 (3 DISKS) **KLONDIKE DELUXE AGA** - Card game in 256 colours. Superb. Look out for the great cardsets. WB 3.0+ ONLY.
G442 **TMA** - Linear Sci Fi space puzzle shoot-em-up (what a mouthful!). Very good. NOT WB 13
G387 **MONOPOLY v1.1** -Great computer conversion of the board game.
G383 **ROCKETZ** - 1 or 2 player spit screen Trust spin off. Utilises raytraced graphics for he ships. Wow. WB 3.0+ ONLY.
G344 **SHEPHERD** - Based on Populas, the classic God game. Looks amazing. NOT WB 1.3
G304 **DELUXE GALAGA** - The finest PD shoot-em-up of them all.

UTILITIES

U512 **AF COPY v4** - Directory Opus type file manager with configurational buttons. NOT WB 1.3.
U513 **256 COLOUR ICONS** - Give your Workbench an extra touch of class with these superb 256 colour icons. WB 3.0+ ONLY.
U514 **IMAGINE 3.0 TEXTURES GUIDE** - For Imagine 3.0 only.
U515 **MUI v2.2** - Due to popular demand, Multi User Interface. NOT WB 1.3
U516-U517 (2 DISKS) **PAGESTREAM v3C PATCH** - Upgrades the earlier bug ridden version of Pagestream 3.
U518 **VIRTUAL MEMORY MANAGER V2.1** - Turns your hard drive into virtual memory which will increase your overall computer memory. Requires a 68040 or 68030 CPU with MMU. NOT WB 1.3.
U519-U520 (2 DISKS) **MAGIC WORKBENCH ICONS 3** - For amiga users aspiring for that Workbench beautiful look. NOT WB 1.3.
U521 **VIDEOTRACKER 2 AGA** - Create amazing looking AGA demos with no coding experience. WB 3.0+ ONLY.
U522 **VIDEOTRACKER 2 OCS** - Videotracker for non AGA amiga's. NOT WB 1.3.
U523-U526 (4 DISKS) **VIDEO TRACKER EXTRAS** - Four disks full of extra effect routines and objects, etc...
U527 **FONT FARM 9** - Masses of Bitmap fonts for use with Deluxe Paint, Workbench, etc.....
U528 **FONT FARM 10** - More lovely bitmap fonts.
U529 **HARD DRIVE GAME INSTALLERS** - Games installers for Alien Breed AGA, Assassin SE, Body Blows, Body Blows 2 ECS, Goal, Ishar 2, Lemmings 2, Ruff and Tumble, Super Stardust, Super Frog, Zool 2 ECS, Walker. Alien Breed 2 Tower Assualt, Aladdin AGA,Desert Strike, Mortal Kombat 2, Elmania, Bubble And Squeak. NOT WB 1.3.
U310 **PAY ADVICE ANALSYER 4.2** - Shareware wage slip database. Limited shareware version. NOT WB 1.3.
U530 **AUTO STEREOGRAM v2.d** - Generates those amazing 3D random dot stereogram pictures. NOT WB 1.3.
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U532 **MORE 256 COLOUR ICONS** - Loads more great icons plus an AGA icon editor. WB 3.0+ ONLY.
U533 **ACCOUNT MASTER v3c** - Shareware personal accounts manager. Very professional with many features. Limited Shareware release. NOT WB 1.3.
U451 **SPECTRUM EMULATOR v2.0** - New version of the Spectrum emulator. Includes some games.
U434 **VIRUS WORKSHOP v4.2** - Just out. Powerful multi-function virus checker and killer. NOT WB 1.3.
U486 **DISK MAG CREATOR v1.21** - Produce your own disk magazines with ease.
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U329 **EPU STAKKER** - Compressor that hides in the background of your Workbench. Can compress data up to 50%, doubling the capacity of your hard drive. NOT WB 1.3.
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U591 **AMIGA FAX 1.40** - Latest shareware version of this excellent fax software for fax modems. Hard drive installation only.
U592 **REND24 1.5a** - Powerful image conversion programme. The more memory the better. NOT WB 1.3

U580 **LOTTERY WINNER** - Take the indecision out of selecting your National Lottery numbers, and use this programme instead. WB 3.0+ ONLY

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D228 **BEAUTY PACK 1** - Collection of the best intro's around. Intro's are mini demos.
D229 **BEAUTY PACK 2** - More great intro's for demo collectors.
D230 **BEAUTY PACK 3** - Another well presented pack of intro's
D231 **BEAUTY PACK 4** - The last in the series of intro's from the top euro coding groups.
D232 **BAD ZOOM** - Rubbish visuals but funky music track. I like it!
D233 **TRACKERS 242** - Great follow up to the original ground breaker. If you only have 2 meg, disable all external drives (inc. HD's). WB 3.0+ ONLY.
D234 **VITAL** - From up and coming coding group, Mystic. WB 3.0+ ONLY.
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ANIMATIONS

A179-A185 (8 DISKS) **TRIP IN A VEIN** - Microcosm style flight through a vein with a space craft. 71 amazing frames of animation. Reviewed in the November issue of Amiga Format. 6 megabytes of memory required. WB 3.0+ ONLY

MISCELLANEOUS

T76 **THE CHARTS ISSUE #13** - The demo charts and general disk magazine with many articles. Very well presented.
T77-T78 (2 DISKS) **MOVIE GUIDE (1994) V2.04** - Massive database on movies for film buffs. Hard drive installation only. NOT NOT WB 1.3.
T79-T80 (2 DISKS) **CHEAT LISTER v3.05** - The largest compilation of game cheats and tips you'll probably ever find. 800 games covered. NOT WB 1.3.
T71 **DEADLOCK 9** - The SCENE disk magazine. Kewl.
T72 **UPSTREAM 9** - Another top Scene magazine with loads of up to date news and more.
T74-T75 (2 DISKS) **GRAPEVINE 20** - Needs no introduction. The latest issue of the most sort after Amiga disk mag around.
T67-T68 (2 DISKS) **LUCIFER'S BOOK OF SHADES** - Secrets from the occult. OVER 18'S ONLY.
T69 **LUCIFER'S WICKED GRIMOIRE** - More information and practices of the occult. OVER 18'S ONLY.
T36 **ALIENS CONFIDENTIAL** - Loads of (true?) stories from around the globe on Aliens and UFO's.More of the same.
T28 **DREAMS FOR AN ANGEL** - Reveals the signicance of objects, colours, animals, etc.. in your dreams.

T81 **ALIENS CONFIDENTIAL 2** - Compiled by us. The long awaited follow up. Fascinating true to life UFO related material.

EDUCATION

E97 **NIGHT MATH ATTACK** - Shoot-em-up maths game.
E95 **KIDS DISK 5** - Educational games for kids by D.Moran.
E96 **KIDS DISK 6** - More excellent games for juniors.
E80 **DYNAMIC SKIES** - Powerful astronomy programme.
E71 **CHILDRENS FAVOURITES 1** - Nursery rhymes.
E53 **CHILDRENS FAVOURITES 2** - More nursery rhymes.
E60 **CODE MUNGUS** - Tests your Highway Code knowledge.
E59 **STARVIEW** - Plots the positions of the stars and planets.
E60 **PRO ASTROLOGY** - An aid for horoscope predictions.
E81 **ANIMAL LAND** - Farm yard childrens game. NOT WB 1.3
E44 **THE MATHS ADVENTURE** - Maths problems adventure game.
E36 **STEAM ENGINE ANIMATION** - Detailed cross section anim.
E37 **FOUR STROKE PETROL ENGINE** - Cross section animation.
E42 **TUBOFAN & TURBO JET ENGINES** - Aeroplane engines.
E55 **COMMUNICATE** - Teaches you Morse code, Braile, Flags, sign language etc..
E74 **EASY SPELL II** - Spelling game. NOT WB1.3

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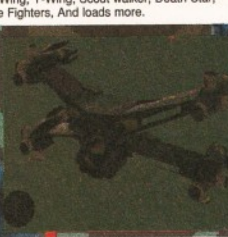
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U479 IMAGINE MISCELLANEOUS TEXTURES - Textures for Imagine.
U480-U482 (3 DISKS) IMAGINE STONE TEXTURES - Textures for Imagine.
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C PROGRAMMING

Toby Simpson is back and it's time to start working on your C programming skills again.

We've had a little break from C Programming, but we are now back after the Christmas break, broke, and wanting something cheap to do with our evenings. Amazingly, this is just how programming your Amiga can help you. If you've been following the past few instalments, you'll know that we're currently in the process of knocking up a really useful utility to allow you to find files on disks, or hard disks. You know how it is, after a year of using your hard disk, there are thousands of files all over the place, and you're looking for one and you can't quite remember its name. But you remember bits of it. You could delve into the complex syntax of the CLI program "SEARCH", or alternatively you can use our shiny GUI based Finder with ARexx. OK, so we haven't implemented the ARexx yet – that's for next month.

Last time, we put a basic GUI (Graphic User Interface) into the Finder. It wasn't much of a user interface, there were three buttons which you could not press, and one list-view gadget which showed all the matches that popped up. Our goal this month is to make all those buttons work, and add a couple of string gadgets so that the user can type in the search directory and match pattern.

As with last month, this program is designed to make use of the features which Commodore added to the operating system from Kickstart 2. If you have Kickstart 1.3 or below, then to be honest, you should upgrade to at least 2.1, preferably 3.1. These new features have over halved the size this Finder program would have had to have been otherwise.

NEW THINGS

The major new thing which has gone into the program is the Event Handler. The Event Handler is a central point in our program which controls all the other bits. In our case, it is receiving information about which buttons have been pressed on the window, and then calling the appropriate functions to make the required action happen.

On the Amiga, when you open a window, you can specify a list of events which are of particular interest to you, such as when the user clicks on the close gadget of the window, for example. These are called IDCMP events. There are a whole bunch of them, ranging from the Closewindow one, to "A disk has been inserted", or "The user re-sized your window".

We are interested in a couple, in particular. We want to know when the user presses on one of our buttons, or clicks on the close gadget. If you specify a list of IDCMP events when a window is opened, intuition creates a message port for you. When one of the events you have asked to hear about actually occurs, intuition delivers a message at the port. You can then pick this up, look at what it is and act accordingly. Let's have a look at the basic event handler in the Finder program:

```
        while (!quit_program)
        {
        /*
        ** Wait for Message to Arrive:
        */
        Wait(1L << finder_window->UserPort- ☛
>mp_SigBit);
            /*
        ** Loop through processing events:
        */
        while (imsg = GT_GetIMsg(finder_ ☛
```

HOW TO USE THE LISTINGS

Only certain parts of the original program have changed, functions which have changed dramatically are re-listed. Replace the copies of the appropriate functions you have with the new ones, and you should be in business. As well as a couple of replacements, there is an all-new function for handling window events, and some other minor changes.

If you get into a pickle, next month we have the whole listing, and the current listing is also available in the amigashopper conference on CIX.

The replacement main() function:

```
  /***************************
**
** void main(void)
**
** Main program entry function.
*/
   void main(int argc, char *argv[])
{
   char search_dir[64];
   char search_string[64];

   /*
   ** Title us and parse arguments:
   */
   printf("%s\n", FINDER_VERSION);
     if (argc != 3)
     {
     printf( "Argument count incorrect:\n"
             "Usage: FINDER path ☛
matchpattern\n");
     return;
     }
     strcpy(search_dir, *++argv);
   strcpy(search_string, *++argv);
     /*
   ** Open any libraries we might want:
   */
   if (!(IntuitionBase = ☛
OpenLibrary("intuition.library", 37L)))
     {
     printf("Can't open intuition library ☛
V37\n");
     cleanexit(RETURN_FAIL);
     }
   if (!(GadToolsBase =
OpenLibrary("gadtools.library", 37L)))
     {
     printf("Can't open gadtools.library ☛
V37\n");
     cleanexit(RETURN_FAIL);
     }
     if (!(OpenGUI(search_dir,☛
search_string)))
     {
     printf("Unable to open window\n");
     cleanexit(RETURN_FAIL);
     }
     /*
   ** Call window Event Handler:
   */
   EventLoop(search_dir, search_string);☛
     cleanexit(0);        /* Exit with no☛
error code */
}
```

The replacement OpenGUI() function:

```
  /***************************
**
** BOOL OpenGUI(char *in_Drawer, char
*in_Search)
**
** Opens the GUI components for our program.☛
This means opening the
** window with gadgets on it. Returns TRUE ☛
for success, FALSE for a
** failure.
*/
   BOOL OpenGUI(char *in_Drawer, char☛
*in_Search)
{
   struct Screen*screen;
   void   *vi;
   long   gadget_count = 0;
   long   win_width, win_height, win_x, win_y;
   long   button_width, button_height, ☛
button_start;
   long   list_width, list_height, list_start;
   long           string_start, string_width;
   long           window_top, window_inner;
   int              count = 0;
   struct NewGadget ng;
     /*
   ** Get public screen information and ☛
visual  info:
   */
   if (!(screen = LockPubScreen(NULL)))
     {
     printf("Unable to lock default public ☛
screen.\n");
     return FALSE;
     }
   if (!(vi = GetVisualInfo(screen, ☛
TAG_DONE)))
     {
     printf("Unable to get visual ☛
information\n");
     return FALSE;
     }
     /*
   ** Knock up some sensible window dimensions:
   */
   win_width = screen->Width / 3;
   win_height = screen->Height / 2;
   if (win_width < MIN_WIDTH)  win_width =☛
MIN_WIDTH;
   if (win_height < MIN_HEIGHT)  win_height ☛
= MIN_HEIGHT;
     win_x = (screen->Width / 2) - ☛
(win_width / 2);
   win_y = (screen->Height / 2) - ☛
(win_height / 2);
     /*
   ** Open the window we are going to use:
   */
   if (!(finder_window = OpenWindowTags(NULL,
        WA_Title,        "Finder",
        WA_Left,       win_x,
        WA_Top,          win_y,
        WA_Width,        win_width,
        WA_Height,     win_height,
        WA_RMBTrap,      TRUE,
        WA_NewLookMenus,TRUE,
        WA_Activate,   TRUE,
        WA_CloseGadget,  TRUE,
        WA_DepthGadget,  TRUE,
        WA_DragBar,      TRUE,
        WA_IDCMP,        IDCMP_REFRESHWINDOW |
                         IDCMP_CLOSEWINDOW |
                         LISTVIEWIDCMP |
                         IDCMP_GADGETUP |
                         BUTTONIDCMP |
                         IDCMP_VANILLAKEY |
                         IDCMP_RAWKEY,
          TAG_END)))
```

```
window->UserPort))
        {
        gad = (struct Gadget *)imsg-☛
>IAddress;
            switch(imsg->Class)
            {
            /*
            ** Window Refresh Case:
            */
            case IDCMP_REFRESHWINDOW:
                GT_BeginRefresh(finder_window);
                GT_EndRefresh(finder_window,☛
TRUE);

                break;
                /*
            ** User clicked on close gadget:
            */
            case IDCMP_CLOSEWINDOW:
                quit_program = TRUE;
                break;

            /*
            ** User pressed a button:
            */
            case IDCMP_GADGETUP:
                break;
            }
            GT_ReplyIMsg(imsg);
        }
    }
```

So what does all this do then? It's easier than it looks. Firstly, there is no 'C' there which we have not used before. Let's quickly look through the steps for waiting for, and acting on intuition messages:

1. Wait for a message to arrive.
2. Get the message.
3. Check to see if it is one we are interested in, and if so, process it.
4. Reply to the message.
5. Go to step 2 if there are any more messages, or step 1 if there are not.

Step 4 is VITAL. You MUST reply to any message that you get. If you don't, then your Amiga will slowly run out of memory. Also note that in step 5, we are going back to step 2 if there are any more messages. This is a common trap for beginners on the Amiga: When you know that a message has arrived at your message port, it's important to read that as "one OR MORE message(s) have arrived at your message port." Several could arrive at once, like busses.

Here is how we wait for a message:

```
Wait(1L << finder_window->UserPort-☛
>mp_SigBit);
```

This is probably the most cryptic line of C we've used yet! It deserves a brief explanation. More often than not, your program will have several windows, and each of these will have a message port. Worse still, if you are also processing ARexx stuff, you'll be wanting to wait for messages to arrive at the ARexx message port in your program also, so that you know when an ARexx command has been issued. This begins to look rather depressing, as you have to wait on a whole bunch of message ports at once, which is of course not possible.

The Amiga provides a solution to this little puzzler, in the way of signals. Each message port can have a unique signal number. Each task on the Amiga can have up to 16 signals (There are ways around that limitation, but that's another story!). You can create a special mask of signals from all of your message ports, and then use the exec.library Wait() function, which will exit when any of the signal bits indicates a message has arrived. You can then check the result of Wait() and determine which signal triggered, and process the messages accordingly.

In this month's listing, however, we are only using one port, and one signal, so we're not interested in the result of Wait(). The stuff inside the brackets on our Wait() line gets the signal number out of the message port structure and uses that as the mask. Now our signal has arrived, we need to loop around getting messages:

```
while (imsg = GT_GetIMsg(finder_window-
>UserPort))
        {
    /* PROCESS MESSAGES HERE */
        /* ALL DONE, NOW REPLY TO THE MESSAGE
    */
    GT_ReplyIMsg(imsg);
    }
```

There is an exec.library function for getting messages, GetMsg(), but we don't use that here because we are using gadtools.library, which

```
        {
        printf("Unable to open window!\n");
        return FALSE;
        }
    /*
  **Create context gadget:
  */
  first_gadget = NULL;
  context_gadget = ☛
CreateContext(&first_gadget);
    /*
  **Set up defaults:
  */
  memset(&ng, 0, sizeof(struct NewGadget));
  ng.ng_VisualInfo = vi;
  ng.ng_Flags = 0;
  ng.ng_UserData = NULL;
  ng.ng_TextAttr = screen->Font;
  ng.ng_GadgetID = 0;
  previous_gadget = context_gadget;
    window_top = finder_window->BorderTop +
BORDER;
  window_inner = win_height - (window_top) ☛
- (finder_window->BorderBottom + BORDER); ☛
    list_width = win_width - (BORDER * 2);☛
  button_width = (list_width / 3) - BORDER;☛
    button_height = screen->Font->ta_YSize +
BORDER;
  list_height = window_inner - ☛
(button_height * 3) - (BORDER * 2);
/* CHG */
    list_start = window_top;
  button_start = window_top + list_height +☛
BORDER;
    string_width = (button_width * 2) + ☛
BORDER;
  string_start = button_width + (BORDER * 2);
    /*
  **Create list-view first:
  */
  ng.ng_TopEdge    = list_start;
  ng.ng_LeftEdge   = BORDER;
  ng.ng_Width      = list_width;
  ng.ng_Height     = list_height;

  gadget_list[gadget_count] =
CreateGadget(LISTVIEW_KIND, previous_gadget,
    &ng, GT_Underscore, '_', TAG_DONE);
    previous_gadget =
gadget_list[gadget_count];
  gadget_count++;
    /*
  **Now create our buttons:
  */
  ng.ng_LeftEdge = string_start;
  ng.ng_TopEdge = button_start;
  ng.ng_Height = button_height;
  ng.ng_GadgetID = ng.ng_GadgetID + 1;
  ng.ng_Width = string_width;
    /*
  **Put a string gadget in:
  */
  ng.ng_GadgetText = "_Drawer";
    gadget_list[gadget_count] =
CreateGadget(STRING_KIND, previous_gadget, ☛
&ng,
    GTST_MaxChars, 255,
    GTST_String, in_Drawer,
    GT_Underscore, '_', TAG_DONE);
    sg_Drawer = gadget_list[gadget_count];
    previous_gadget = ☛
gadget_list[gadget_count];
  gadget_count++;
    ng.ng_GadgetID = ng.ng_GadgetID + 1;
  ng.ng_TopEdge += button_height;
    ng.ng_GadgetText = "_Search";
    gadget_list[gadget_count] =
CreateGadget(STRING_KIND, previous_gadget,☛
&ng,
    GTST_MaxChars, 255,
    GTST_String, in_Search,
    GT_Underscore, '_', TAG_DONE);
    sg_Search = gadget_list[gadget_count];
    previous_gadget =
gadget_list[gadget_count];
  gadget_count++;
    ng.ng_GadgetID = ng.ng_GadgetID + 1;
    ng.ng_LeftEdge = BORDER;
  ng.ng_TopEdge += (button_height + BORDER);
  ng.ng_Width = button_width;
    count = 0;
  while (button_text[count++])
    {
    ng.ng_GadgetText = button_text[count - ☛
1];
      gadget_list[gadget_count] =
CreateGadget(BUTTON_KIND, previous_gadget,
      &ng, GT_Underscore, '_', TAG_DONE);
      previous_gadget =
gadget_list[gadget_count];
    gadget_count++;

    ng.ng_LeftEdge += (button_width +
BORDER);
    ng.ng_GadgetID = ng.ng_GadgetID + 1;
    }
    /*
  **Fall over if gadgets were not created ☛
right:
  */
  if (first_gadget == NULL) return FALSE;
    /*
  **Add our buttons to the window:
  */
  AddGList(finder_window, first_gadget, 0,☛
~0, NULL);
  RefreshGList(first_gadget, finder_window,☛
NULL, ~0);
    GT_RefreshWindow(finder_window, NULL);
    return TRUE;
}
  The new EventLoop() function:
  /****************************
**
**void EventLoop(char *in_Drawer, char
*in_Search)
**
**Main Event Handler
*/
  void EventLoop(char *in_Drawer, char ☛
*in_Search)
{
  char   search_dir[64];
  char   search_string[64];
  char   search_pattern[128];
    char   work_string[128];
    struct Node       *node;
  struct IntuiMessage *imsg;
  struct Gadget       *gad;
  BOOL   quit_program = FALSE;
    /*
  **Initialise our list:
  */
  NewList(&find_list);
    /*
  **Process events:
  */
  while (!quit_program)
    {
    /*
    **Wait for Message to Arrive:
    */
    Wait(1L << finder_window->UserPort-☛
>mp_SigBit);
      /*
    **Loop through processing events:
```

contains special replacement functions for GetMsg() and ReplyMsg() which deal with the gadtools.library functions.

That's pretty much all there is to it. The listing is pretty self explanatory after you know this. We're looking for three message types, IDCMP_CLOSEWINDOW, IDCMP_GADGETUP and IDCMP_REFRESHWINDOW, the latter of which is simple to deal with in our case – we just call a couple of functions in the gadtools.library to perform the refresh operation for us.

You'll note that we have moved the search code from the main() function into the EventLoop. The program still requires an initial path and search string to be passed in from the CLI, and those are used to set the initial two values in our new string gadgets. Pressing the FIND button on the window will cause the search code to be run.

We've also moved the listview handling stuff into the EventLoop, so that we can clear and re-start the list if the user wishes to do more than one search. Note how straight forward it was to add new gadgets to our window. If we were feeling particularly clever, we could do all of our gadget creation in one loop and have a shorter, easier to maintain array of simple information for the gadgets we wanted (eg, type, width, height, and so forth), but for windows of the complexity we are using, it is not necessary to go the additional work of writing such a routine. (If there's enough demand, we could knock up a decent requester generator in a future C programming article as a programming exercise, write to me at the AS address if you're interested.)

We certainly have not covered everything, you'll note that none of the keyboard short-cuts are working this month. To act on these, we need to receive and process an additional IDCMP message, IDCMP_VANILLAKEY – which gives us access to the ASCII codes of any key which is pressed by the user while our window was selected. We'll add that one in next month, and finally remove the dependency on the CLI for good (but certainly retain the option).

You'll see that because we kept the program nice and neat and modularised, we have been able to use one of the functions for something it was never intended to be used for:

```
    sprintf(work_string, "Searching '%s' ☛
for '%s'", search_dir, search_string);
  NotifyFind(work_string);
```

Our NotifyFind() function is used to show the user each match we have found for their search in the listview gadget. Since this simply takes a string parameter and adds it to the screen list, we can use it to output other stuff. In the above case, we prepare a string showing what is been searched for, and where, and use NotifyFind() to put that on the display. We also add a line to the end showing how many matches were found. This way the list is neater, as the user can see what was been searched for, and get a count of matches at the of the list.

USING THE LISTING

The listing has been tested under both SAS/C and DICE. In order to use the listing with DICE you will need a reasonably recent version, such as that which is provided with Amiga Shopper's "Complete Amiga C" book. In addition to a compiler, you'll need the source code from last time around. The listing is getting pretty large now, so we're not able to print the whole thing and fit an article in as well this month! Next month, however, the complete current listing will be on the coverdisks.

As well as a full current listing for our finder program, we will be looking into ARexx, and how we can add it into our application. The idea is, to allow ARexx to set the search directory and match pattern for us. This provides us with some really cool options, for example: An ARexx script to get a list of all drives and then search every one of your hard disk partitions for a match, would only be a few lines long.

This is what makes ARexx so useful to us, it allows users to self-expand application programs you have written to do the jobs they want it to. Well, with that to mull over, I'm off, but tune in next month for the next thrilling, gripping instalment of The C programming Course! AS

```
    */
    while (imsg = GT_GetIMsg(finder_window-☛
>UserPort))
      {
      gad = (struct Gadget *)imsg->IAddress;
        switch(imsg->Class)
        {
        /*
        **Window Refresh Case:
        */
        case IDCMP_REFRESHWINDOW:
          GT_BeginRefresh(finder_window);
          GT_EndRefresh(finder_window, TRUE);
          break;
          /*
        **User clicked on close gadget:
        */
        case IDCMP_CLOSEWINDOW:
          quit_program = TRUE;
          break;

        /*
        **Button Press:
        */
        case IDCMP_GADGETUP:
          switch(gad->GadgetID)
            {
            case GID_QUIT:
              quit_program = TRUE;
              break;
              case GID_FIND:
              /*
              **Re-Initialise List:
              */
              while (node =☛
RemHead(&find_list))
                {
                free(node->ln_Name);
                free(node);
                }
              NewList(&find_list);

GT_SetGadgetAttrs(gadget_list[GID_LIST], ☛
finder_window, NULL,
                GTLV_Labels, NULL,
                  TAG_DONE);
              files_matched = 0;

              /*
              **Pull out search strings:
              */
              NotifyFind("");
              NotifyFind("——————————-");
                strcpy(search_dir, ((struct☛
StringInfo *)sg_Drawer->SpecialInfo)->Buffer);
              strcpy(search_string,((struct☛
StringInfo *)sg_Search->SpecialInfo)->Buffer);
              sprintf(work_string, ☛
"Searching '%s' for '%s'", search_dir,☛
search_string);
              NotifyFind(work_string);
                /*
              **Pre-Parse the AmigaDOS ☛
search pattern:
              */

ParsePatternNoCase(search_string,
search_pattern, 127);
                /*
              **Start the search:
              */
              if (!(SearchDir(search_dir,☛
search_pattern)))
                NotifyFind("- Operation ☛
not totally successful.");
              else
                {
                sprintf(work_string, ☛ "-
%ld matches found", files_matched);
                NotifyFind(work_string);
                }
                break;
            }

          break;
        }
      GT_ReplyIMsg(imsg);
      }
    }
    /*
  **Clear out list if anything in it:
  */
  while (node = RemHead(&find_list))
    {
    free(node->ln_Name);
    free(node);
    }
    /*
  **Program exit:
  */
  return;
}
```

Replace the definitions from under the last #include line up to just before the Library Bases part with this:

```
  /*
**Defines:
*/
#define  TOTAL_GADGETS  6
#define BORDER          8
#define MIN_HEIGHT      130
#define MIN_WIDTH       320
#define GID_LIST        0
#define GID_DRAWER      1
#define  GID_SEARCH     2
#define GID_QUIT        3
#define GID_FIND        4
#define GID_CANCEL      5
  /*
**Function prototypes:
*/
BOOL SearchDir(char *directory, char ☛
*pattern);
BOOL NotifyFind(char *file);
void cleanexit(int returnvalue);
BOOL OpenGUI(char *in_Drawer, char☛
*in_Search);
void EventLoop(char *in_Drawer, char☛
*in_Search);
void CloseGUI(void);
  /*
**Global variables:
*/
long files_matched  = 0; /* Total files ☛
found */
char *VERSION     = "\0$VER:"FINDER_VERSION;
  struct Gadget *first_gadget,
*context_gadget, *previous_gadget;
struct Gadget *sg_Search, *sg_Drawer;
struct Gadget *gadget_list[TOTAL_GADGETS];
struct Window *finder_window = NULL;
  char *button_text[] =
  {
  "_Quit", "_Find", "_Cancel", NULL
  };
```

Remove these lines from cleanexit():

```
    /*
  **Free our list:
  */
  while (node = RemHead(&find_list))
    {
    free(node->ln_Name);
    free(node);
    }
```

The symbol ☛ means do not type a return – keep typing to the end of the next line. ▼☛ means type a space, then keep typing to the end of the next line.

Accessible AURA

It's time the Amiga got an accessible 12-bit sound sampling system. Is Aura the answer to the Amiga musician's dreams? Tim Tucker finds out.

Sampling sounds on the Amiga has been possible for some time, but in the past the sound quality has been limited by the fact that most samplers available are of only 8-bit quality. There *are* both 12 and 16-bit samplers available for the Amiga, but they're often expensive and have traditionally only been made to fit in the extra card slots on the Amiga 2000, 3000 and 4000 range of computers. Owners of Amiga 600s and 1200s have thus been unable to share in the joys of high resolution sound digitising (apart from HiSoft's own Clarity 16, which didn't really hit the mark).

That's all about to change with the release of HiSoft's Aura sampling package. Aura consists of a hardware sampling cartridge plus sampling software, and is capable of recording and playing back sounds in both 8-bit and 12-bit resolutions. The twist is that the sampling cartridge fits into the PCMCIA slot on Amiga 600 and 1200 computers (sorry 500 owners, you're still out of the picture when it comes to high quality sampling), and does not plug into the parallel port at the back of the Amiga as is usually the case.

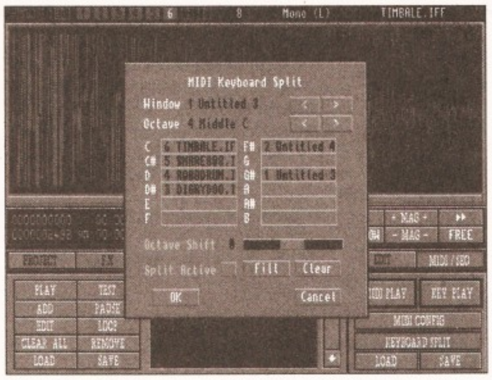
Setting up the Aura sampling system is a piece of cake. The hardware slots neatly into the PCMCIA slot, and rubber feet are provided (but not stuck on bizarrely, you have to do that yourself) to ensure that the unit stays level with the computer and doesn't put unnecessary strain on the PCMCIA port. Loading the software is equally trouble free, and as you'd expect it's simplicity itself to install the program onto your hard drive if you have one.

Probably the most complicated thing about setting up is connecting the hardware to external sources. The hardware itself has more than the usual number of input and output plugs, and all the sockets are standard stereo phonos, just like those found on home hi-fi systems. First up are the left and right input sockets. This is where you plug in the leads from external audio equipment for sampling on the Amiga. You can use almost any standard sound producing source – a hi-fi amp, tape recorder or CD player are the most usual pieces of equipment to sample sounds from.

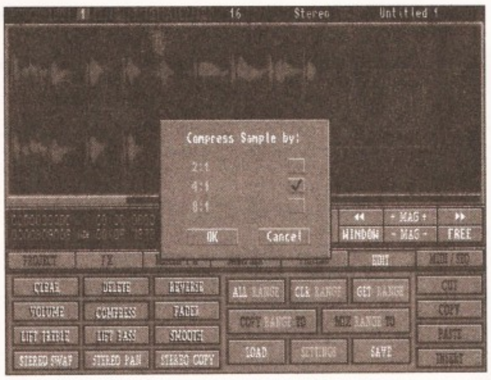
Say for example you wanted to sample some music from the new Stone Roses album on CD. You'd put the CD in your portable CD player (for example), then take the phono leads from the headphone socket of the CD player to the stereo input sockets on the Aura hardware. In this particular case you'd need a lead with 3.5mm jack on one end and stereo phono on the other (these are easy to get hold of from any high street Dixons store).

Next to the input sockets are two similar phono plugs for stereo output. Without these you wouldn't be able to hear or monitor the samples that you want to take. These are best connected to the amp of your hi-fi or to the input of a mixing desk. You could, for example, plug the stereo phono lead from the output of the Aura cartridge to the Aux port on the amp of your hi-fi, and then listen to your sampling work through your home hi-fi speakers.

There is yet another pair of inputs next to the outputs, but this time they actually connect to the Amiga's audio phono jacks. This may seem a bit weird when the cartridge is already attached to the Amiga via the PCMCIA slot, but it is necessary to make this connection if you want to hear the 8-bit samples that your Amiga is capable of, as well as the 12-bit samples that the Aura can handle. Feeding the output from the Amiga effectively mixes the two outputs and plays them both



Aura is a MIDI compatible sample player, meaning that you can assign samples to keys on a MIDI keyboard and play them in real time.



The range of editing facilities in Aura is remarkable. You can alter the volume, treble, bass and even the compression of any sample.

USING THE SAMPLES

Apart from being compatible with OctaMED 5.5 when it arrives, there are ways of playing high quality 12-bit samples from within Aura itself. Click on the MIDI/SEQ button and you're taken to a part of the program which allows you to determine how you want to control the samples.

First of all, you can string separate samples together using the basic sample sequencer.

You give each item in the sequence list a sample to play, out of the windows in memory, as well as a name and a loop setting.

For example, you could take a one bar drum beat sample and make it loop four times, then immediately follow it with another one bar drum beat that loops twice.

Although inherently limited (you can only play one sample at a time), it is a very handy way of checking whether drum breaks work well next to each other.

It could also be used to lay down sampled drum beats onto tape, because as long as you have edited the samples carefully, you can make the loop accurate without having to fiddle around with tempo settings, like you would if you were triggering the sample from a MIDI sequencer.

The other play option is to trigger the samples from an external MIDI keyboard. You can alter which MIDI channel Aura responds to, and allocate different samples to separate keys or sets of keys on the MIDI keyboard.

Samples are mapped across the keyboard so that you can change the pitch of a sample by playing different pitches on the keyboard, but there's also an Octave Shift setting if you want the sample to play at the original pitch whatever key you play it on.

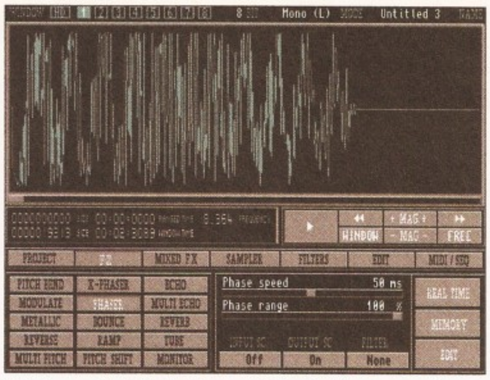
You can save the MIDI maps to disk for later use. If you haven't got a MIDI keyboard, you can always choose to map samples to keys on the Amiga keyboard.

HARD DISK RECORDING

As well as sampling sounds into memory, Aura can also sample directly to hard disk. This is a very useful option, as the amount of space on a hard disk is much larger than RAM, and therefore can store huge samples. In fact, with enough hard disk space you could record an entire song digitally.

With hard disk recording, the sample never goes into memory. Instead it is stored directly onto hard disk. When playing back, the sample information is dragged straight off the hard drive and played out of the audio out. If you want to take advantage of this feature (for example, to make master digital recordings of your music), it's important that you have a hard drive with a fast disk access speed.

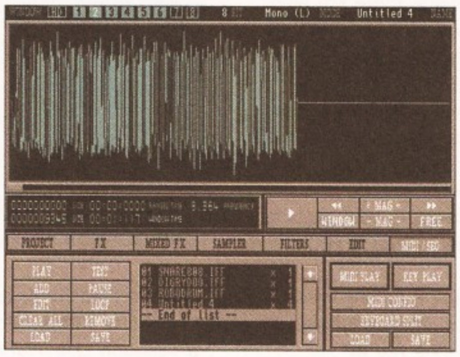
If your hard drive is slow at accessing, you can improve the situation by freeing up space on the hard drive, as the drive heads don't have to skip around the disk surface so much to store the sample data.



Click on the FX button and the bottom panel changes to reveal all the effects you could possibly want. And they're real high quality too.

through the sampling hardware.

Once you've got the mess of leads spawned by the connection process out of the way, it's time to start recording some samples, and it's a simple double click on the program icon to get started. The disk comes with a few example samples that you can load straight away and start messing around with, and the manual outlines a tutorial to get you going, which is handy if it's your first attempt at working with sampled sounds.



You can sequence the samples from within Aura, which is handy if you want to lay down repetitive loops, such as drum breaks.

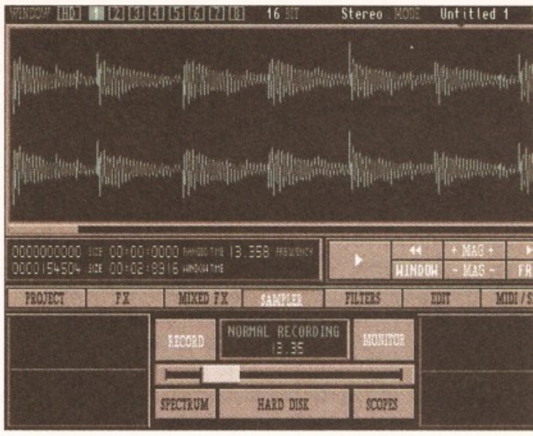
For more experienced sampler users, the software is incredibly intuitive. All the controls are well laid out, there is none of the clutter or garishness that can be found in so many sampling programs, and it's incredibly easy to feel your way around the program and discover things for yourself (which is what I started by doing).

The program defaults to sampler mode, and shows two little windows (if you're working in stereo) which indicate the levels of the incoming audio. If you're new to sampling, this stage may be the most baffling, as at this point you can't hear any sounds that you're feeding into Aura, you can only see their wave forms on the screen.

To actually hear the sounds you simply click on the Monitor button. Two large windows appear to show you the waveforms of the incoming sounds, and the audio is heard through wherever you've routed the output of the sampling hardware. The processing power required to render the sample in real time leaves the Amiga powerless to do anything else, even moving the mouse pointer, so the monitor option is purely for determining the level of the desired sound, and to check whether it is either too loud, which results in distortion and clipping, or too soft, which lacks the quality of a higher volume sample due to the less favourable signal to noise ratio.

When you've adjusted all the output volumes to the correct levels, it's time to actually take a sample yourself. The first thing that you have to do is open a New Window, in which the sample can be recorded. The program allows up to 9 windows to be resident in memory at any given time, as long as you have enough RAM to cope with them all. You only see the window you're currently working on at any given time, but you can easily go to another window by pulling down the Windows menu at the top right of the title screen and choosing the window you want to view. This is a great system, because it means that you can keep track of all the samples you're doing without having to keep loading them from floppy or hard drive. It also vastly improves the edit options, as you can easily cut or copy a piece of the sample from one window and paste it into another.

When you open a new window, you get a dialogue box in which you specify the kind of sample you want to create, whether it be mono or



The two windows at the bottom display the incoming sound waves. The recorded sample is displayed in the main window above.



You want filters? You got 'em. There is a vast array of filter options available which can rid your samples of any unwanted frequencies.

stereo, and 8-bit or 16-bit (the 16-bit option creates a 12-bit sample – see the separate box entitled HOW MANY BITS? for an explanation). You also can determine what frequency you want the sample recorded at, and the length of the sample in terms of the maximum possible size that your memory permits.

After you've OKed the kind of sample you want to record, the next step is to click on Record just before the sound you wish to sample. It helps if at this point you have a way of monitoring the source, so that you can time the Record enable right. This is no problem, you just have to run your CD player (or whatever) through the hi-fi as well as out of the headphone sockets and into Aura. If, however, the only output you have on the source is the headphone socket (as is the case with a Walkman for instance) then you'll have to use a bit of guess work to get it right.

Some sampling programs feature a way to get round this by allowing you to trigger the recording process whenever the incoming sound goes above a certain pre-determined level. It's a shame that Aura doesn't support this feature, as it can be a great time saver, especially when the sample is preceded by silence, as is the case with many sampling CDs. Still, it's not an insurmountable problem, and only takes a little more care when actually setting up the sound.

I think you'll be extremely surprised by the results in Aura. The sound quality of 12-bit samples is quite incredible, and easily usable in the most professional situations. You'll need a lot of memory and hard disk storage space to get the most out of the package, but if you're serious

HOW MANY BITS?

Although we've said that the Aura is a 12-bit sampler, samples can only be saved as 8-bit or 16-bit samples. Why? The thing is that, although the Aura hardware is a 12-bit sampling system, the software holds sounds internally and stores them on disk in either 8-bit or 16-bit format.

When saving a sample file, you have three options. You can save it as an IFF file, which is the standard sample format used by most other Amiga programs that support sample files. The IFF standard can only be used to save 8-bit samples, but although the sound quality is inferior to 12-bit samples, it allows you to use samples in MIDI sequencers, with other externally sequenced sounds.

If your file is a 12-bit sample (stored as a 16-bit file in memory), you can save it onto disk as an AIFF file, which is a more adaptable form of the IFF standard. You can't load AIFF samples into other programs, but it does produce better quality samples, and the manual recommends that you use it as often as possible.

It also says that third party developers are starting to integrate support of AIFF samples into their software, for example the forthcoming OctaMED 5.5 will be able to take full advantage of these files. This is great news, as for the first time you'll be able to use the high quality samples that the Amiga is capable of in wider contexts, such as trackers and sequencers.

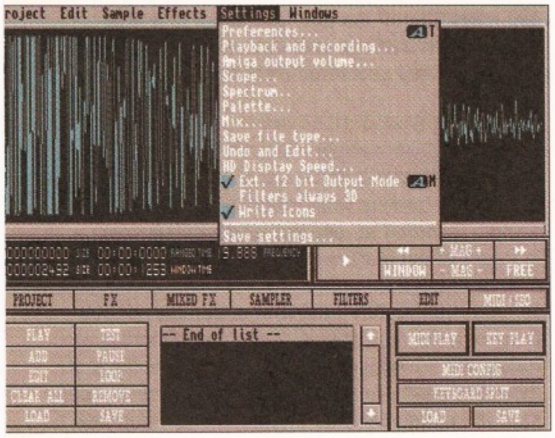
The final option is to save the file in RAW format. This is of little use, because it doesn't contain any information about the sound, not even whether it's 8-bit or 12-bit! If you want to load a RAW sample back into Aura, you have to open a window with all the right parameters (e.g. resolution and frequency) already in place.

If you save in RAW format, it's wise to give the sample a name which reminds you what kind of sample it is. What's the point of it? Well it allows you to load files into public domain tracker programs, many of which can only accept sounds in this format. It's also very handy for programmers who don't want to go through the rigmarole of interpreting the IFF or AIFF sound formats.

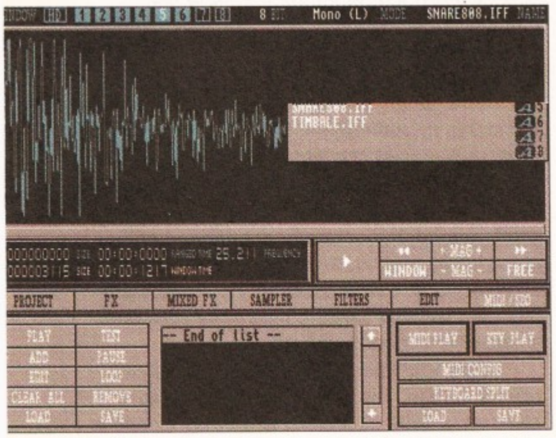
about making high quality digital recordings, it's worth upgrading your Amiga to cope with it. 1200 owners are the best off, because the 2 Megs of RAM is really the minimum requirement if you want to take advantage of the superior quality of the Aura. Of course, you could always save a lot of memory by sampling in mono 8-bit, but that really defeats the object of buying a 12-bit sampler in the first place.

The power of Aura doesn't stop at recording high quality samples though. Click on the Edit button and you get a whole new panel at the bottom of the screen which provides plenty of editing operations for you to perform on the sample. It's worth mentioning at this point that the user interface (horrible expression that, but you know what I mean) is extremely well thought out. All the controls are accessed by buttons on the main screen, meaning you don't have to constantly swap between different screens and windows of the program.

Also, instead of trying to cram the screen with all the controls at once, you only ever see the buttons that correspond to the mode that you're in. So all the edit operations, such as Cut, Copy and Paste, are only ever on screen when you're in edit mode. It's all extremely intuitive, and even the first time user should find it far less confusing than the majority of sampling programs. Better still, if you're a dedicated menu person, all the controls can be found in pull down menus, in many cases with corresponding keyboard controls marked. The whole program gives you a lot of options, and it makes accessing them as painless as possible, while still being flexible enough to allow you to use your own preferred method. Full marks!



Any good software deserves a comprehensive preferences menu, and Aura doesn't disappoint. There's plenty to mess about with here.



A pull down menu can be used to select one of the 8 sample windows in memory. Great for cutting and pasting segments of samples.

Editing is very comprehensive. As well as the usual cut, copy, insert and paste, there are also options for volume, compression, fade, treble lift, bass lift and reverse. This gives you all options you need to subtly shape the sound if it's not quite the way you want it. You can apply edits to the entire sample or to an area of it that you mark off with the mouse, called the range. There's a separate section of the software entirely dedicated to providing special audio effects to your digitally recorded sounds. See the box named EFFECTIVELY SPEAKING for details.

As well as all the effects and editing options, you can also use an extremely comprehensive array of filtering options, allowing you to manipulate the frequency content of a sample to your heart's content. There are enough options in here to keep even the most avid sound engineer amused. You can selectively cut or boost user-definable bands of frequencies, either Finite Impulse Response (FIR) or Infinite Impulse Response (IIR). These terms describe the way that the filters work on the sounds. FIR filters are more accurate (you can determine the upper and lower bands of the frequency), but they can only cut the specified frequencies. IIR filters, on the other hand, are easier to use, and also allow you to boost as well as cut.

There are various displays which help you to pinpoint the exact part of the sound that you want to apply filters to, including a spectrum analyser, which indicates graphically the presence of a whole range of frequencies in the sound, and a 3D frequency display known as the 3D FFT screen.

All in all, the Aura is a quite astounding piece of kit for the Amiga, and at an absolutely incredible price. It requires a fairly powerful Amiga system to make the most of it, with 1200 owners (obviously) being the best served. Despite this, the results are quite simply astonishing. The sound quality is unbelievably good, and it's true to say that this wouldn't be out of place in a top professional studio. Add to this the extremely sexy effects section, and you've got an aural treat.

Even more impressive is the lovely way the program's been put together. Every single option that you could possibly want has been catered for, and yet the program never feels difficult to use. Everything's logically laid out, and it appears obvious that the people responsible for Aura are musicians first and foremost. If you're looking for a seriously powerful sampling package for your Amiga 600 or 1200, there really is no other choice. I'd go so far as to say this is the best audio product of the year on the Amiga. AS

EFFECTIVELY SPEAKING

As if there wasn't enough on offer in Aura, there's also an entire section dedicated to adding effects to your sampled sounds. The effects available are:

Pitch Bend	**Modulate**
Metallic	**Reverse**
Multi Pitch	**X-Phaser**
Phaser	**Bounce**
Ramp	**Pitch Shift**
Echo	**Multi Echo**
Reverb	**Tube**

Each effect gives you control parameters to adjust, for instance the Reverb allows you to alter the depth and delay settings.

You can apply the effects to the sounds in Aura in real time, which alters sounds as they are actually played into the Amiga, effectively treating Aura as an outboard effects unit.

Alternatively (and far more usefully) you can edit existing samples so that the effect is built into the sample itself, and there's a very handy preview function to check whether the effect will work, plus the essential Undo if it all goes horribly wrong.

The quality of effects is, in line with the sound quality in general, extremely high, far surpassing those of any other samplers I've heard on the Amiga. In fact, until now, I've always treated the effects section of a sampling program as something of a novelty. Not so with Aura. The Echo, Reverb, Metallic and Phaser deserve a special mention for their ability to bring even a drab sound to psychedelic life.

The Aura goes even one stage further and provides a completely separate Mixed effects section, which provides pre-set combinations of all the different effects, with a whole scrolling list on tap, providing such things as Phaser Reverb and Metallic Echo.

Again, this is an astoundingly useful addition which broadens the sonic possibilities infinitely. It just oozes professionalism.

WHAT
Aura sampling package - £99.95
WHO
HiSoft
WHERE
HiSoft
The Old School Greenfield
Bedford, MK45 5DE
☎ 1525 718181

CHECKOUT
AURA

Features: **94%**
There's all that you could dream of in a sampler, and a lot more besides.

Ease of Use: **95%**
Quite simply one of the best designed bits of software I've ever seen on the Amiga.

Documentation: **90%**
A clearly written manual that provides a good tutorial for beginners, as well as making all the important information accessible to old hands.

Value for Money: **97%**
An amazing price. How did they manage it?

Overall Rating: **96%**
It's rare that we see a product that excites us on the music front, but Aura has done just that. This deserves to go down as an Amiga classic. Buy it if you're at all serious about sampling on your Amiga.

AMIGA SHOPPER BEST BUY

Know what I mean?

Discover what the top industry figures really think.

Dale Larson on future communications

Once upon a time, most computer users were addicts who spent most of their waking hours alone with a machine, having no contact with others. The relationship between man and machine was all about the machine. In the mid to late eighties, revolutions in user interfaces made computers usable even by those who would not join an electronic monastery.

These revolutions made it easy for people and computers to connect. Still, using a computer was a solitary activity. With personal computers, the connection was between a single man and a single machine, alone together for whatever work or play they had to share.

Larger computers might have several people connected to one machine, but it was all still mostly about what the machines, not the people. The revolution of the nineties is in connecting man and machine to other machines *and* to other men. It is the revolution of communications. Gone are the days when Mhz and Mb define the power of a computer (and thereby the coolness of their owner).

Today, bragging rights are measured in bps (Bits Per Second). Whatever the speed, it is no longer about what machines do, but about what people do. As modems and LANs increase in popularity and local BBSs are replaced by global networks, people are communicating in new ways, doing things never before possible. The most noticeable widespread impact so far has been email.

Almost as cheap as the snail mail and almost as fast as the phone, it is the best of both. Everyone who is anyone has an email address. I send email to my customers in Japan and Germany, to my political representatives in Washington, D.C., and to my friends where ever they may be. I often respond to email within minutes of its sending. Sometimes an email conversation consisting of several rounds back and forth takes place during a single afternoon.

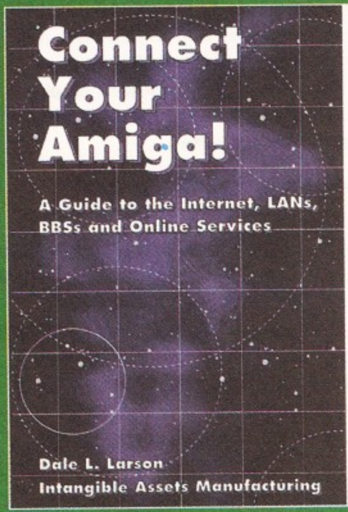
I pay a low flat rate monthly fee for the privilege of sending unlimited email. I read (or ignore) my email as I choose, unlike the blasted phone which insists on bothering me at *its* convenience. Though email may be the most common new communications technology, cooler things are out there. The World Wide Web allows hypertext documents to transparently link to other documents on computers across the globe so that you can browse (or "net surf") from movie reviews to Hubble telescope photos to online shopping malls.

In these documents you can even hear sound samples and view pictures. Everything is constantly updated, and most documents point to dozens of other interesting documents.

With a little patience and knowledge, you could set up an AGA Amiga and a fast modem to start surfing the experientially growing Web today. The future holds more brilliance. Last week, the Rolling Stones broadcast twenty minutes of a live concert video over the Internet MBone (anyone cool enough to have a 128kbps Internet connection with an MBone feed could watch for free).

New hardware on PCs allows video conferences over a 28.8kbps standard phone link. Hey, the multimedia of the future isn't going to be on standalone machines, it is going to be across wicked new networks.

By the time that has happened, you'll just be a by-stander if you haven't enjoyed at least some of the fruits of today's communications technology. The communications revolution has been building, and its time has come. Join in or be uncool!



"Hey, the multimedia of the future isn't going to be on standalone machines, it is going to be across wicked new networks."

Richard Baguley on what makes the Amiga unique



"When you go to a show like the World of Amiga, you really understand what makes the Amiga unique – the users."

Computer shows are funny things. I mean, you go in, you wander around for a bit, chat to a couple of dealers, see what new things are on show, have a coup of tea and before you know it the security guards are about to set the dogs loose to get you out of the hall because it's time to go home.

Well, that's the way it seems to happen to me, anyway. The World of Amiga Show was certainly no exception to this. I visited it on a decidedly gloomy looking Friday afternoon, and plenty of other people made the effort as well. It wasn't the biggest computer show I've ever seen, but it was pretty damn busy. All of the dealers I spoke to certainly seemed to be pleased with the turnout, and nearly everybody I saw was carrying something that they had bought.

I spoke to several people from Commodore UK and they felt that the show was a real shot in the arm for them. It's very easy to get disheartened, especially when you are in the kind of situation that Commodore UK are in. It's very easy to think that it doesn't really matter what happens to the Amiga. However, when you go to a show like the World of Amiga, you really understand what makes the Amiga unique – the users.

When we ran the Future Entertainment Show in October, there were three theatres: the Amiga one, the PC one and the console theatre. The biggest crowds were consistently at the Amiga theatre. Sure, there were a few crowds for the Doom challenge on the PC one and a pretty good crowd for some of the console sessions, but these quickly faded away. The Amiga sessions were consistently well attended and there was one other big difference – people asked questions.

Instead of chasing after the latest £60 console game sensation (which everybody will be bored with by next week) or trying to shoot the editor of PC Gamer, Amiga owners were asking insightful questions and learning something new to do with their machine.

Instead of running with the crowd, Amiga owners are people who are interested in really getting something out of their computer. Instead of being swayed by the multi million dollar marketing campaigns from people who insist that you have to have "Intel Inside" to get ahead, they choose a machine which is powerful, cheap and has some of the best programs in the world on it. And who can argue with that? AS

SOFTWARE FOR FREE

This month Graeme Sandiford comes over all nostalgic on the eve of a new year and introduces PD new-comer Richard Munro.

Welcome to PD World. This is the first edition of the year, but it's actually on the eve of something new and wonderful. Next issue will be special and PD World will be playing a special part. Anyway I won't spoil the surprise, but let's just say it's something big. Anyway back to the present. We have some excellent utilities this month. It has been quite nostalgic, as I've encountered a few of my favourite programs from times past. We've got the latest versions of Superview and SnoopDOS. We also have a review of an old favourite, JCGraph, by budding PD-reviewer Richard Munro (see opposite).

SUPERVIEW V4.0

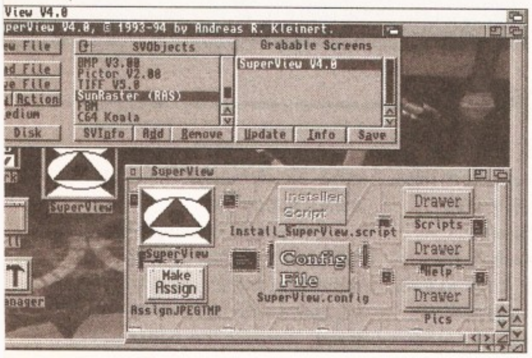
KEW=II (V1175)

When I bought my A1200 one of the first graphics utilities I found that made use of the AGA chipset was a tiny little program called SuperView. The thing that first impressed me was that while most programs only had partial support for the new modes, SuperView could display any resolution picture in any colour mode.

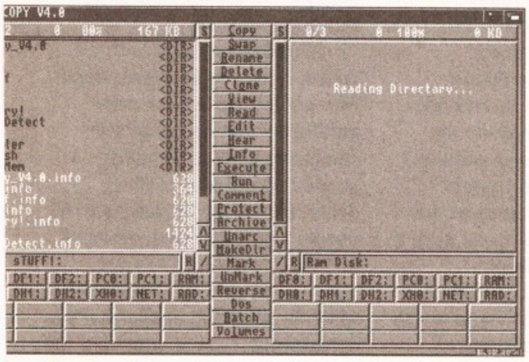
As a result of the nostalgia brought on by these fond memories, I was hoping for something special. The most obvious improvement that has been made to the program is that it now has an interface. This consists of several command buttons and lists of available file formats and grabbable screens.

If you merely wish to view a file you can click on the View File button. This will bring up a file requester that can be used to select the file for viewing. However, If you intend to convert or just save an image, you will need to load it in first, otherwise the image will be removed from memory as soon as the display is cancelled. The image can then be saved by selecting a file format and pressing the save button.

At the moment the program has support for IFF-ILBM, IFF-ACBM, PCX, GIF and BMP files. Others can be added by using SVobject files, the ones included with this version are: IMG, MAC, Targa, TIFF, SunRaster and a couple C64 formats. You can also select and grab a screen from a list of currently active ones. You can choose between a disk-based file and clipboard objects by toggling the Medium button.



The latest version SuperView supports even more file formats and an interface.



Copy, archive, view, run, clone, listen to and display files with AFCopy.

Despite this broad selection of formats, I have not managed to load 24-bit IFFs or JPEGs successfully. This is obviously a great shame as these are probably the two most used formats. I also encounter difficulties in displaying HAM8 images correctly – the pictures often appeared smeared or garbled.

On a more positive note, the program does have on-line help through an AmigaGuide document – you just press the help key and then click on the offending gadget. This will take you to the node of the document that deals with that topic. Once there, you can easily navigate the rest of the document.

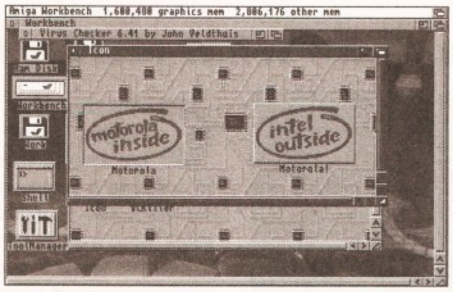
However, this is not enough to redeem the program's shortcomings or to relieve my disappointment. That's not to say that there is not great potential here. If the bugs are fixed this could be an indispensable tool, as it's easy to use and expandable. But at the moment it's too flaky for my liking.

Program Rating 79%

FLUMMY UTILS #1

On-line PD

Despite the very un-serious name, Flummy is actually a collection of serious PD programs – on the whole anyway. The disk's content is certainly varied; there are programs to make your day-to-day use of your computer easier, kill unpleasant viruses, reduce the amount of wear and tear on your hard drive and lots of other stuff too.



Uh, it's like a humourous icon or something – ah the wit of Amiga-users.

● It could be you. You could win the national lottery, OK, so you may not stand much of a chance, but it could be you. However, you could try using the mighty computing power of your Amiga to increase your chances. How so? Well you could try a small program called the Lottery Number Generator.

You are probably wondering how the program works. Well, it doesn't go by mystical star signs or the birth days of cabinet members. Rather, it relies on random chance – whether or not this actually improves your chances I'm not sure. Surely a random value will still have odds of 1 out of 50 million or whatever.

Although I'm not a statistician, I expected some fancy maths – perhaps one or two complicated equations or perhaps a variant of a chaos theory. I don't know, maybe it might improve your chances – it will at least make your Amiga feel as if it's earning its keep.

● If there is one thing that Amiga has no shortage of, it's file management utilities. I mean, you've got Directory Opus, SID and DirWork – we're spoilt for choice. Nevertheless the creators of AFCopy (nothing to do with the Future Publishing mag) have decided that there is room for one more, well three if you count 020 and 030 optimised versions.

The program's interface looks more than a little like the earlier versions of DirWork. There are two windows, both of which can be used as destination or source directories for copying or moving files or directories. Between these two windows you'll find a row of buttons. These can be used to perform a variety of tasks, such as viewing images, reading or editing text files, extracting or adding an archive or entering a DOS command.

The way these buttons work is quite simple, instead of including these features into the code of the program, it relies on external programs such as text-editors or picture viewers to perform those tasks. Although the program has its default tools you can change these to the programs you have installed on your machine.

Underneath each window you'll find its Devs buttons. These are the buttons that correspond to different Dev units such as DF0: and DH1:.

Overall, this product is nothing remarkable, but it is a good solid program that is easy to use and relatively flexible. If you are looking for a flexible file-managing utility, but can't afford Directory Opus you would be well-advised to check AFCopy out.

● Now here's a interesting inclusion – an icon. That's right, just an icon. However, it does have a little Intel outside logo on it. As if that wasn't enough, if you click on this icon it will change to a logo that reads Motorola inside. Uh, like wow... or something.

● VCKiller is a viruskiller with but a single purpose in life – to eradicate all traces of the Commander virus. What this virus has done to

And he's a jolly good fellow...

Congratulations to Richard Munro, prolific letter-writer and budding PD-reviewer – he is our first winner of "I want To Be Star". He'll be getting some cash, or something, not to mention seeing his review in print. If you think you have got what it takes to become a star check the boxout on page 86.

JCGRAPH

Fish Disk 926

This program was originally released as shareware back in April 1992, but in August 1993 the author sadly decided that the Amiga market would not support him, and decided to discontinue development of JCGraph. However, this is still, as far as I know, the only Amiga-program capable of generating all manner of graphs, and, most importantly, saving them in a variety of scalable formats.

The program's biggest failing is immediately apparent on loading – the program accepts as input only ASCII text files created by the user in a text editor, and there is no provision for entering data from within the program.

A quick delve into the above average documentation reveals the file format, and one detailed step-by-step example. The file format is actually quite simple, being really only the raw data plus a few other pieces of data. The example is an excellent way of getting to grips with "writing" your own graphs.

Once you have successfully loaded your data into the program you have the choice of 26 pre-defined graph types, which can also be added to by the user, since they are loaded in as separate modules (this file format is also included in the doc file, but is rather more involved). Some of these are rather more useful than others, but all the basic 2D & 3D styles are there.

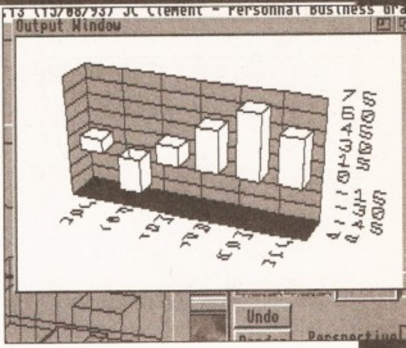
After selecting your graph type, it is possible to rotate the quick preview of the graph through all three axes using three sliders in the control window. Other options include varying the perspective, changing the font size for each axis' legend independently, and altering the palette of the finished graph.

Once finished, hit the render button and your graph will be generated. The time taken for this is perfectly acceptable, even the most complex graphs taking well under 30s on a 25MHz '030. The program also generates the legend for the graph, although this will only be saved in EPS & 3D-GEO formats.

The program's major selling point, however, must be its output formats. Of course it supports the ubiquitous IFF-ILBM bitmap format, allowing the use of JCGraph's output in virtually any Amiga program ever; more interesting are the scalable output formats. These allow the graph to be scaled to any size within the word processor or DTP package with no loss of quality, and still be output at your printers maximum resolution.

The formats supported include 3D-GEO, AegisDraw2000 and both colour and b&w EPS. This comprehensive list makes scalable output compatible with many Amiga WP and DTP programs, including Final Writer, Wordworth 3, Professional Page and Pagestream.

Printing from JCGraph itself was disappointing, since the program seemed to simply do a screen dump, thus generating jaggies that do not appear when the graph is saved as a scalable file and then printed from within Final Writer, for instance.



JCGraph is an old, but still pretty cool 3D graph-drawing program.

On the whole, JCGraph proved to be very stable, and is capable of producing excellent quality results worthy of any similar program on the PC or Mac, and unique on the Amiga. Apart from the necessity of creating data in a text editor, the program is actually very user-friendly, and the results are well worth the effort.

Program rating 90%

instill such hatred I'm not sure – maybe it killed VCKiller's family or ran off with its girlfriend – but, whatever the reason it is certainly a commendable course of action.

- WBFlash 2.1 is a tiny Wb2.0+ program that does some odd things with your Workbench screen. Don't worry, nothing too sordid; it simply cycles through a range of colours. It can either replace the backdrop or active Workbench colours with this range of colours. To be honest, it all sounded a bit daft and pointless to me at first, but it is oddly soothing especially if it is restricted to Workbench's active colour.
- Those among you who have good hearing will have noticed that hard drives keep spinning even when it is not being accessed. This probably shortens your drive's life-span and certainly ruins your sleep if you leave your Amiga rendering in your bedroom overnight. HDOff is a program that puts a stop to this needless spinning of hard drives. The program works by turning your drive off after a specified period of inactivity.

While this collection does not contain any jaw-droppingly good programs, it does have some useful ones. However, it does have more than its fair share of useless ones and just plain odd programs. If you are looking for a file manager you might find this collection useful – if not, then you would do well to stay away from it.

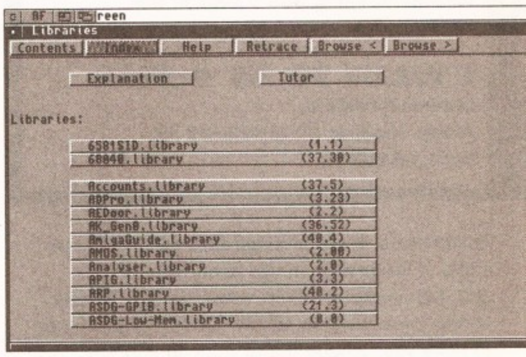
Product Rating 76%

WB2-3 UTILS-SYSTEM

KEW=II (U1123)

There are certainly plenty of Workbench 2 and 3 utility collections floating around at the moment. These have tended, on the whole, to be collections of lots of small programs. However, this collection only has five programs – LastAlert2, SIP, SnoopDOS 3, Sysinfo and SystemGuide.

- The are certain programs that every serious Amiga-owner has on his or her hard drive or floppy disk collection. SnoopDOS is just such a program. It's particularly useful to me when trying to review PD programs that don't work properly. SnoopDOS can be used to keep track of what your Amiga is up to. It monitors all system activity, so if a program fails to run because it couldn't find a file you can find out where the file should be.



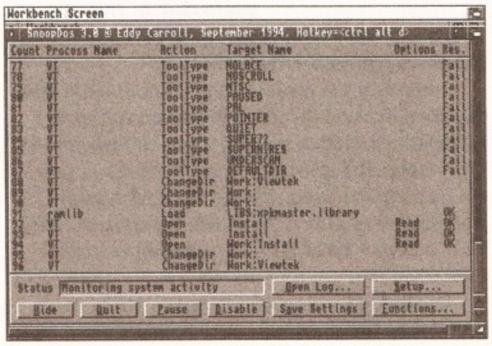
Oh the mysteries of the Amiga's system files. At last there is a guide to help you.

The latest version of this indispensable tool has had quite a face-lift and several new options. Earlier versions would simply open a window that displayed what calls were made by which programs to Amiga system. The same information is display by version 3, but you can do more than simply enable or disable the program's snooping.

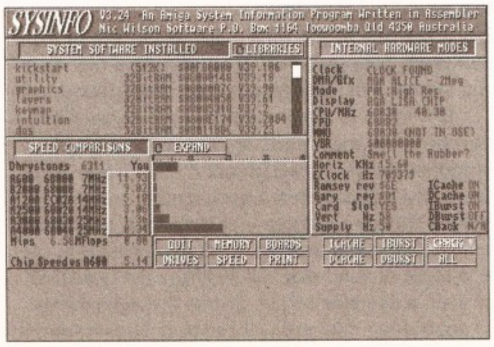
SnoopDOS 3.0 has a full interface you can use to hide, pause, disable or quit the program by clicking on the corresponding button. There are also buttons to open a log file, change the program's setup and its list of functions. Further options can also be set through several pull-down menus.

As with previous versions of the program you must simply have this program, if only to avoid being branded an ill-equipped Amiga-user.

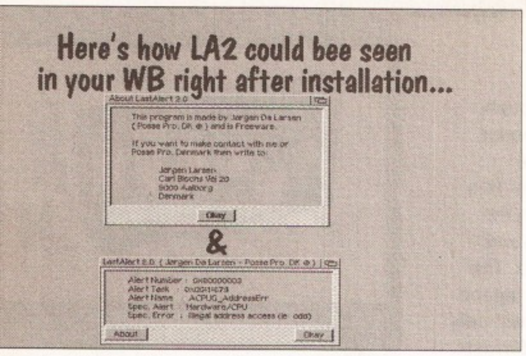
- Sysinfo is another long-time favourite of



The latest incarnation SnoopDOS is just as indispensable as its predecessor.



Sysinfo is another old favourite. It's particularly useful for showing off the speed of your Amiga.



LastAlert 2 is a particularly useful program – it takes note of your last guru.

ANOTHER CHANCE TO BECOME A STAR!

If you have discovered a PD or shareware that you have become totally enamoured with, write in and tell us about. But, don't stop there if you would like to see your name in print. We want you to send in a small review of one of your favourite new PD package.

We don't care what type of program it is, as long as it's good and you can justify its excellence. But, please, *please*, no reviews of SwimSuit Chic 58 or similar slideshows – just serious reviews of serious products for serious readers.

If that's not enough, we'll even pay you if it's a *really* well written review!

Send your review as an ASCII text document, along with a copy of the program, to:

I WANT TO BE A STAR

Graeme Sandiford,
Amiga Shopper, 30 Monmouth St,
Bath, BA1 2BW.

Amiga-users. It's a program that can tell you all sorts of interesting things about your Amiga and then compare it with other models. This is useful for more than simply giving you an excuse to poke your tongue out at a friend and say, "my Amiga is faster than yours, so there". It can be useful when you are trying to get advice or help with your machine.

As well as performing benchmarks to determine the speed of your machine, it can also provide information about which Workbench tasks are being used and the status of any expansion units that are currently in use. When calculating the speed of your machine Sysinfo only uses one benchmark, opposed to the several used by programs like AIBB. Using several benchmarks will give you a more precise idea of the speed of your setup.

Sysinfo is still a handy program to have around and is still on my hard drive after all these years. However, if you are after more accurate information on the ability of your machine you are better off getting AIBB.

● SIP, or, to give it its full name, System Information Program, might be considered a pretender to SnoopDOS' position as the premiere system monitor. Indeed, there are several similarities in the program's appearances as well as the functions they perform.

Actually, a more exact description would be a combination of SnoopDOS and ARTM. Unlike SnoopDOS, SIP can not only trace libraries and screens, it can also remove them. So you can freely remove libraries or close down program ports and screens. I guess the wisdom of this ability relies heavily on your knowledge and experience.

At first SIP seems to be an improvement on SnoopDOS, as it has quite a few more features and even has on-line help. However, after using the program for a while, I discovered that SIP is not one of the most reliable programs around. Occasionally the program would crash the office 1200, particularly when checking which handlers are in use. If it weren't for this failing I think I would prefer SIP over SnoopDOS, as it is the program is still useful as the problem is intermittent.

● If all this talk about handlers, libraries and memory vectors has got you all excited and begging to find out more about the secret life of your Amiga, then you may find SystemGuide of interest. SystemGuide is a self-proclaimed comprehensive reference guide to Amiga software system files. It is an AmigaGuide format document, so you can easily move from topic to topic.

The contents of this guide is divided up into four main headings: Devices, Filesystems, Handlers and Libraries. Also if you get a little confused, or are unused to guide documents, you can get help or use the tutor section of the document. The guide is not so much an in-depth explanation of how libraries and devices work, rather it's more of a catalogue of known Amiga system files. This catalogue can be especially useful if you have a program that needs a particular file to run.

Clicking on any of the four main headings will take you to a list several pages long for the type of files you have selected. Clicking on an entry in a list will bring up information about that file. This information will include a general description and, if available, the name of the supplier. If there is a similar or related file you will be able to click on a node that will take you to the corresponding entry.

The guide really is comprehensive – it includes 67 Devices, 11 Filesystems, 72 Handlers and 403 (yes 403!) Libraries. It's certainly one of the most interesting applications of the AmigaGuide format that I've seen for some time. If you are new to the Amiga and would like to know just which files you need on system and why, then you should definitely have a read of this document.

● If there is one thing that is guaranteed to turn even the most sane Amiga-user into an irrational, salivating wild beast it's a system crash. When this happens it's a good idea to make a note of the guru number that is flashed on screen. Unfortunately the average human is unlikely to be in a state of mind that will facilitate the execution of such a complex action. During these moments of debilitating rage you will certainly benefit from a program like LastAlert2.

LastAlert2 is a Wb2+ program that will record the last message displayed by your machine. This will give you the opportunity to take note of this number while you are in a more... chemically balanced state-of-mind.

When I first tested the program on a 3.1 A1500, by doing 'naughty things' with SIP, I found that the program simply froze the machine when a crash occurred. However, the program worked fine on an A1200, and is definitely a program that will stay in my Wbstartup draw.

Although some of the programs' functions overlap slightly this is an extremely useful collection. This is an especially good collection for intermediate users who would like to get more out of their systems and indulge in a bit problem solving.

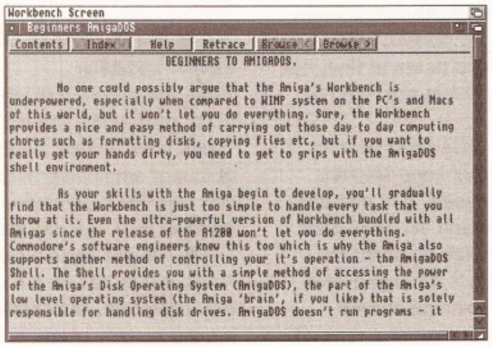
Product Rating 87%

INTRODUCING WORKBENCH AND AMIGADOS

F1 Licenceware (F1-05) £4.99

So you have just bought your first Amiga, or have just emerged from the typical two-month games playing stage. The first thing you are going to want to do, if you intend use your Amiga seriously, is learn how to use Workbench and, if you are a little more adventurous, perhaps AmigaDOS too. Trouble is, that although the Amiga's manuals are quite good compared with other computing platforms, it is still hard work finding out exactly how the Amiga's operating system works.

Introducing Workbench and AmigaDOS is a Wb2+ two-disk licenceware package that sets out to help you get to grips with this excellent operating system. The program takes an inventive approach to this task, which is so simple and natural that I am surprised nobody thought of it before. It creates a pseudo Workbench environment, which has all the system files and menu items as Workbench. However clicking on these files will present you with an AmigaGuide document that explains what the file or item does and how it should be used.



Workbench intro can tell you all you to know about Workbench and AmigaDOS.

This is a great teaching method as you can freely learn about things you don't understand. As the training is effectively done in situ you are more likely to remember what you learn. If you want to learn about a menu item you first need to click on a small at the top of your screen and then pull-down the menu you are interested in. This is a simple system that anybody, even absolute beginners, can use effectively.

Thankfully the explanations do not take a plain this-does-that-and-that-does-this approach to its explanations. Rather it gives plenty of background information and gives practical examples of how the files can be used. The text is written in a manner that is both informative and easy to read, there's also a bit of humour sprinkled around for good measure.

So what does it cover? In short, pretty much everything. The disks contain most of system files you will find on your Workbench disk as well as your Extras disk. In addition to this there is a FAQ

(Frequently Asked Questions) section and documents devoted to setting-up printers and adding ToolTypes.

In conclusion, this system would appear to be the ideal way to learn about the Amiga's operating system. It readily provides information for the curious and help with common problems. However, some people might feel that £5 is a bit much for a document, but a lot of research has gone into this and it is well written.

Product Rating 90%

GENEREXXT PRO

Ahmed Balfakih

Now this program has come a long way – I mean physically come a long way. In fact, it's come all the way from Malaysia (although I would have gladly picked it up personally).

It's a shareware Arexx generator that can perform a variety of tasks. As it relies on ARexx you'll need Workbench 2 or higher and at least version 2.3 of ADPro. The registered version of the program also has support for MorphPlus' features and several functions that can be utilised by owners of the scrummy PAR card.

The programmer believes that this is the most attractive Arexx generator for ADPro, and I must agree with him. The program seems to have been written using CanDo and has a nice professional look to it.

The interface gives you access to all of ADPro's features and some of its own. It also has a useful on-line help facility that can be accessed as either a text help file or a point-and-click system.

Along the bottom of the screen are the tool icons that can be used to set a variety of preferences and perform several tasks. The same functions can be accessed via pull-down menus. Above the icons you'll find the Program window which can be used to display and edit scripts. It can be used in much the same way as a text editor as it has cut and paste functions too.

Above this is the List window which contains a list of the files that you wish to operate on. You can create new lists by selecting directories that contain picture files – don't worry, the program can tell the difference between pictures and non-image files and will only list appropriate files. You can also insert and order more than one list.

The Operators window contains a list of available operators. You can have several lists and can also toggle through them. To the right of these two windows are the Generate, Preview, Run and Exit buttons. Exit obviously quits the program. Generate will generate the script, Preview will provide you with a preview and Run will run the script.

This is a truly impressive example of what can be done with a package like CanDO on the Amiga. The program is easy to use, powerful and, for a registration fee of $20, excellent value. If you would like to get hold of a copy of this program then look no further than this month's Subscribers' disk or contact:

Ahmed O Balfakih
Click Grafix
Kiara Park 168-13/5
Jalan Burhanuddin Hulmi
Taman Tun Dr. Ismail
60000 Kuala Lumpur
Malaysia.

Product Rating 91% AS

GET IN TOUCH

If you have discovered, or written, any PD, shareware or licenseware that you feel is pretty special, then please send it in for review. If you are a shareware author, please send in the registered version of the program.

Also, if you have any suggestions or comments about this section of the magazine, please write to:

Graeme Sandiford
Amiga Shopper
30 Monmouth Street,
Bath BA1 2BW

GET TO THE TOP IN THE PD CHARTS

If you run a PD library and would to tell the world about all the wonderful goodies that are simply bursting out of your disk boxes, send in a list of your top ten utilities and animations.

In every issue we include the chart below to give our readers the opportunity to find out which products are popular with their fellow readers. If you want to tell us what your top-ten PD list looks like, write to:

Graeme Sandiford
Amiga Shopper
30 Monmouth Street,
Bath BA1 2BW

TOP TEN PD CHART – IT'S THE ONLY CHART THAT COUNTS

This month we continue our quest to keep you up-to-date with the most popular PD at the moment. We give you a list of the top ten programs and disks that have been ordered from two PD libraries. It gives you a chance to see which programs are popular with your fellow Amiga-users.

Saddle Tramps PD ☎ 0709 888 127	
1	Relokick v1.41
2	SnoopDOS 3
3	Adress Print V4
4	ST Utilities 2
5	Filthy Lucre
6	Amiga Help 3
7	Virus Workbench V4
8	DBase Collection
9	Viewtek V2.1
10	DMS Kit

1 Lower Mill Close, Goldthorpe, Rotherham, South Yorkshire, S63 9BY.

A1200 Only PD	
1	Image Studio V1.01 AGA
2	Blackboard AGA V1.0
3	Magic WB
4	Magic WB Extras
5	Morphy The Magic Man (AGA) +HD
6	Mand 2000D AGA
7	Ben's AGA Tools Vol.2
8	PPShow 4.0
9	Aktion Replay Pro & DMS2
10	Spectrum Emulator AGA

23 Barn Way, Cirencester, Glos, GL7 2LY

PD HOUSES PD HOUSES PD HOUSES

17 Bit Software, 1st Floor Offices, 2-8 Market Street, Wakefield, West Yorkshire, WFI IDH. Telephone (0924) 366982, Fax (0924) 200943. Catalogue .50p or free if you send an SAE. Accept phone orders, credit cards and direct debit. Open 8am–8pm Mon–Thur, 9am–5.30pm Fri–Sat.
A1200 Only PD – BJ Cowdall, 23 Barn Way, Cirencester, Gloucestershire GL7 2LY. Try to obtain all AGA PD and WB3 utils etc. Catalogue is £1.00 or send a disk and an SAE. No phone orders or credit cards. For a printed catalogue just send an SAE. Disks are £1.00 each. Frequent special offers!
Active Software, PO Box 151, Darlington, County Durham DL3 8YT. Telephone & Fax (0325) 352 260. EMail Bux8@unn.ac.uk. Specialise in professional collections, compile disk packs, essential Aminet compilations and sound samples. Catalogue is 50p. No phone orders, no credit cards or direct debit. Open 9am–9pm. Discounts to User Group members.
Activity Software, 393 Doncaster Road, Rotherham, South Yorkshire, S65 2UF. Telephone (0709) 377730. Catalogue 1st class stamp. Do not accept phone orders, credit cards or direct debit. Open from 9am - 5.30pm Mon to Sat. Additional info, also stock PC Shareware. Crazy Joe's, 141 Effingham Street, Rotherham.
AGA Exchange, 18 Brownshill, Cromer, Norwich, Norfolk, NR27 0QA. specialist areas: AGA PD/Shareware full advice service, PD exchanges, Laser printing service. Catalogue free (with s.a.e. + disk). No phone orders, credit cards or direct debit. Half price membership (£4.50) until 1/11/94.
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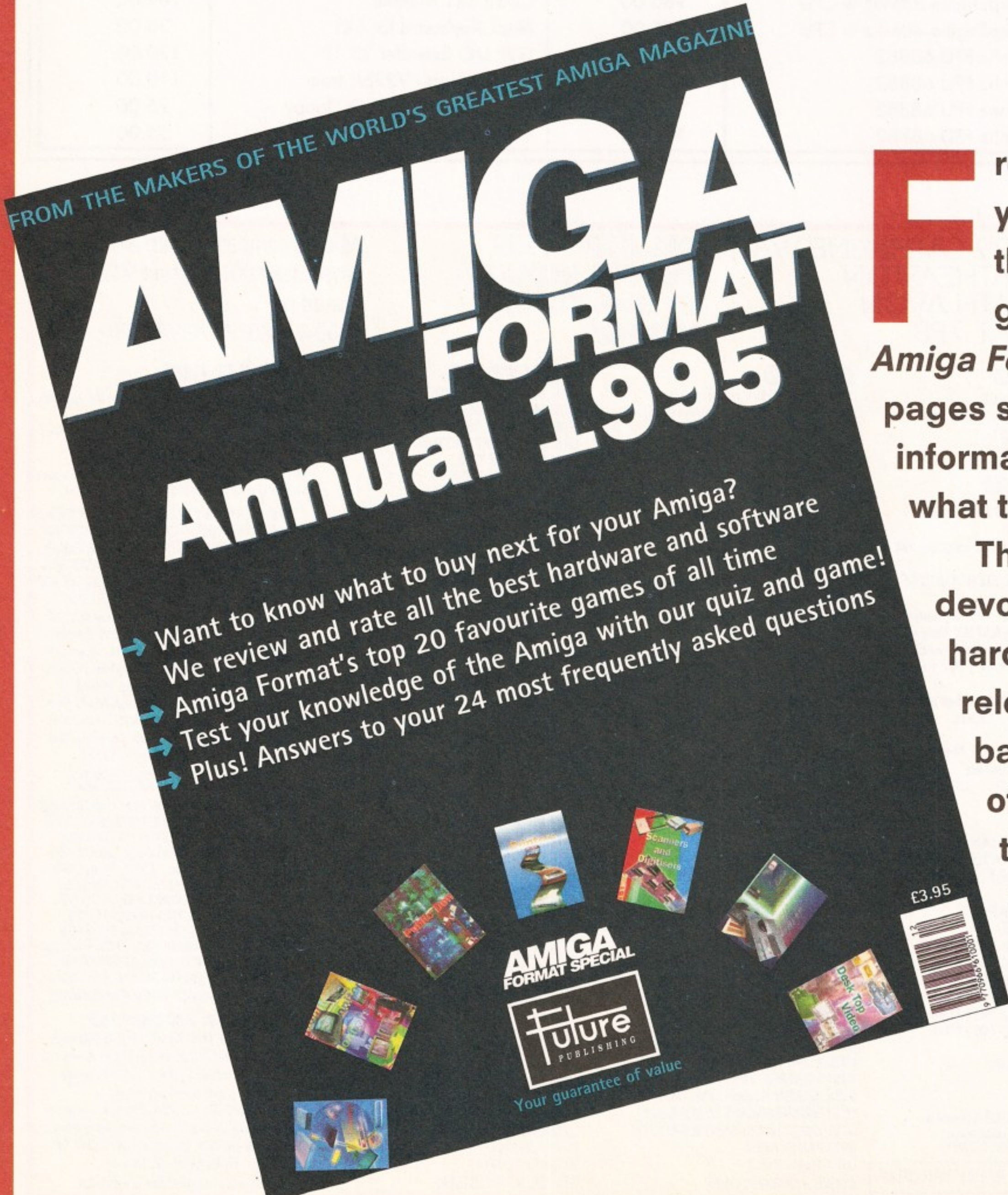
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South Africa Amiga Users Exchange (AUX). Contact Ken Turner, 24 Du Plessis Avenue, Edgemead, 7441 Cape Town, S. Africa. Internet: kturner@aztec.co.za

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USA Japan Amiga Group.Contact: Rick Gardaya, PSC 78 Box 3876, APO AP 96326 USA.

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Assembler Part 5

Toby Simpson is in for an absolutely spectacular exit in this fifth instalment of the long awaited Assembler series. Thrilling stuff, this!

Last month we wrote a program to show "Hello World" on the screen. Although our source code for this was considerably longer than the equivalent for a language such as C (three lines), or BASIC (one line), the resultant program was much shorter (and faster, although you wouldn't notice for such a pathetic program). This was our first introduction to talking to the Amiga's operating system from Assembly language. In order to show "Hello World" we had to open the "dos.library", and use functions from within it. This month we'll be looking at libraries a little closer, and try to achieve something a little more spectacular! Our goal this time around is to open a window on the screen, wait till the Close Gadget is clicked on by the user, and then exit.

To re-cap from last month, in Amiga terms, a library is a collection of sub-routines you can use, grouped by the type of thing that they do. In the same way that IBM-PCs have 'MicroSoft Windows (TM)', the Amiga has 'Intuition'. Intuition is the name for the Amigas Graphic User Interface (GUI), or to put it in a slightly more understandable way, Intuition is responsible for the way you interact with your Amiga with the mouse and screen.

The "intuition.library" contains functions for opening and closing screens and windows, as well as stuff for menus, gadgets and all sorts of other user-interface related goodies. If you're planning on writing any Amiga program with some sort of pretty interface, you'll be needing to work with the intuition library. So, how do we use it?

Firstly, just like we had to open the dos.library, the intuition.library has to be opened before we can use it. This is done by using the exec.library function "OpenLibrary". The code to open the library is almost identical to last months example, but with a different name called:

```
    lea     IntName,a1
    moveq #$00,d0; We don't care about ☛
version
    SYS   OpenLibrary
    move.l   d0,IntBase
    beq   ErrorOpeningLibrary  ; This is ☛
called if the library didn't open.
```

In this example, we load the address of the label IntName into A1, clear D0, and then use the SYS macro to call OpenLibrary. IntName is defined line this:

```
IntName: dc.b  "intuition.library",0
```

When OpenLibrary returns, all being well, we have the Library Base, which is the magic number we need to quote whenever we call a routine in it, in D0. We store this result in IntBase:

```
IntBase: dc.l  0  ; Intuition library base
```

If the result was zero, which means the library did not open, we jump to the label "ErrorOpeningLibrary", where we would cope with it as required. So, now we have opened the library, how can we use it? The easiest way, is to write a small macro, to take some of the work off us:

```
INT:  macro
    move.l    IntBase,a6
    jsr_LVO\1(a6)  ; intuition.library ☛
access macro
    endm
```

You'll note that this is almost identical to the DOS and SYS macros we have already created. Having opened the library, we can use it. The easiest way to check it works, is to try the following:

```
move.l   #0,a0
INTDisplayBeep
```

DisplayBeep is an intuition function which flashes a screen. It needs to know which screen, and this is passed into the function in the A0 register. Since we don't have any information about screens at this point, we pass in Zero. This means "flash *all* the screens."

You may be interested to know, that we can actually make the above code run faster, if we re-wrote it like this:

```
sub.l    a0,a0
INT      DisplayBeep
```

...both examples achieve the same thing. The second one subtracts the contents of A0 from itself, which of course will zero the A0 register.

It is actually quicker to do this than it is to use the move.l command. Why is this? Well, let's look briefly at the code which is generated:

```
207C00000000          move.l  #$00,a0
91C8                  sub.l   a0,a0
```

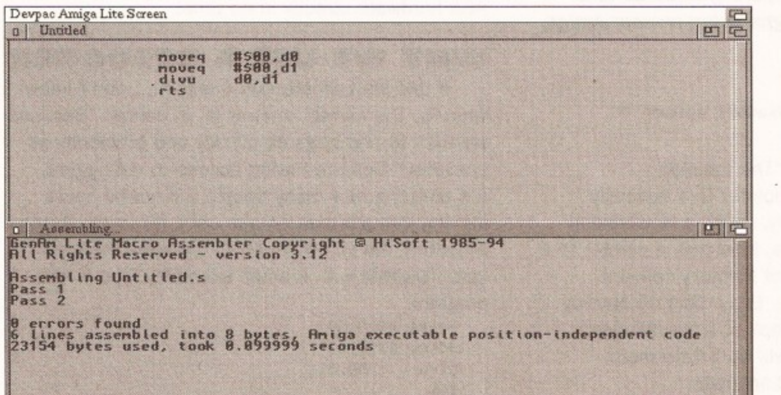
As you can see, the second example is only 2 bytes, where as the first is 6. We can see why, in the move.l example, the actual machine code for the instruction is 207C, the next four bytes are the value we're moving into A0. This is very wasteful. The second instruction requires no additional data, just the two registers in question, which is included in the 91C8 machine code instruction.

There are other issues when deciding how fast an instruction is. Its not just which is shortest. Certain instructions take a lot of time to run, whereas others are much quicker. Take these three instructions:

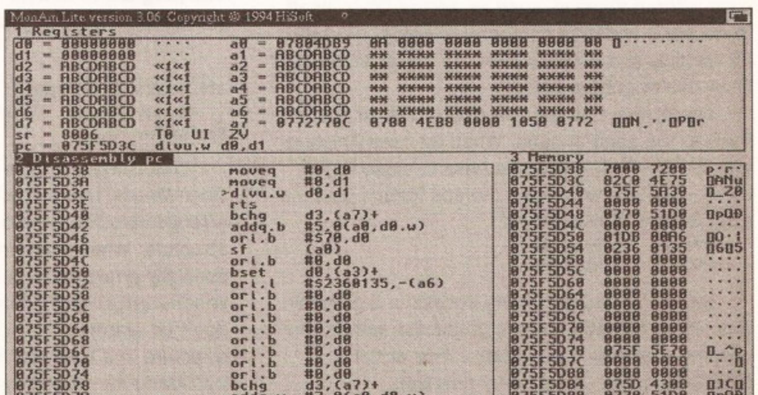
```
C0FC0002    mulu.w  #$02,d0
D040        add.w   d0,d0
E348        lsl.w   #$01,d0
```

The first instruction takes *considerably* longer to execute than the second and third one. Indeed, on the 68000 processor found in A500s, the multiply instruction takes over 70 machine cycles, over 20 times longer than the second instruction. And yet all three perform exactly the same operation: the first multiplies D0 by two, and the second adds D0 to itself, and thus multiplying it by 2.

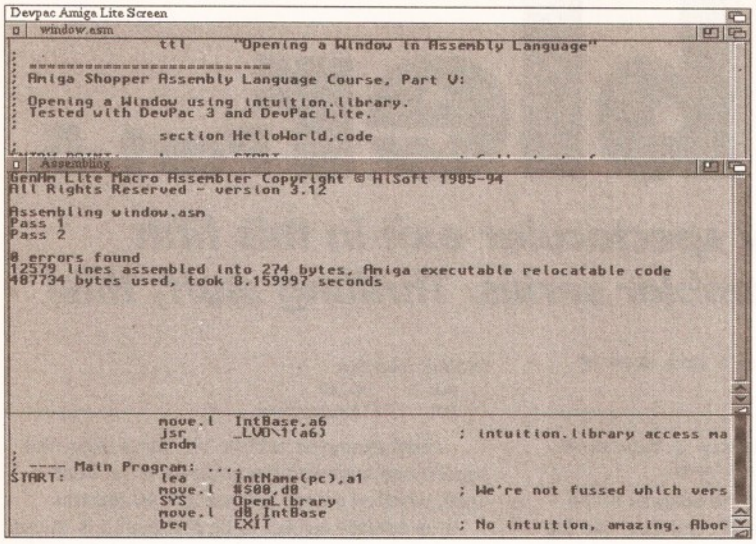
The third is a little more complex, and requires a brief explanation. The LSL instruction means "Logical Shift Left". What it actually does, is to shift a binary number left by a specified number of places. In our example, we shift the word value in



This months listing can be used with last months coverdisk.



Devpac's powerful debugger makes finding bugs ina program much easier.



This monthas been fully tested with Devpac. If you get any errors when assembling, you should check that you have typed it exactly right.

D0 left by 1 place. Let's assume D0 contains the value 3. 3 in binary is:

```
00000011
```

I've padded the value with zeros to make it a full 8 bit number, a single byte. Let's shift this left by one, and put a zero in the new place which appears at the far left:

```
00000110
```

OK, work it out. You'll find, amazingly, that the result is 6. We've doubled the contents of D0. This works for any number, we can multiply it by 2 by simply shifting it left by 1. In fact, we can multiply it by *any* power of 2 (ie, 2, 4, 8, 16, 32 and so forth) with a shift instruction.

LSL is paired with LSR, Logical Shift Right, which allows us to shift binary patterns right. A useful application of this, is dividing by powers of 2. LSRing something by 1 divides it by 2. LSRing it twice divides it by 4, and so forth. In Assembly Language, you'll often find yourself wanting to multiply and divide things by powers of 2, and it's useful to remember that LSR and LSL are sizably quicker than the multiply and divide instructions.

Bit pattern level instructions such as this are quite a complex subject, and we're going to look at these in much greater detail next month together with some neat examples of them in action.

Anyway, back to our three instructions. The other catch is that the first one (the multiply) is much more obvious than the second and third, and is usually the one chosen by beginners. When you start making serious optimisations in your code without thinking, such as adding D0 to itself to double a registers contents, or using LSL/LSR for multiply and divide operations, for example, you know you're getting there.

We digress (but for a worthy cause, of course). Back to the point in hand. When we have finished with the intuition library, we have to close it. We do this just like we closed the dos library, with the exec routine "CloseLibrary":

```
move.l   IntBase,a1
SYSC     loseLibrary
```

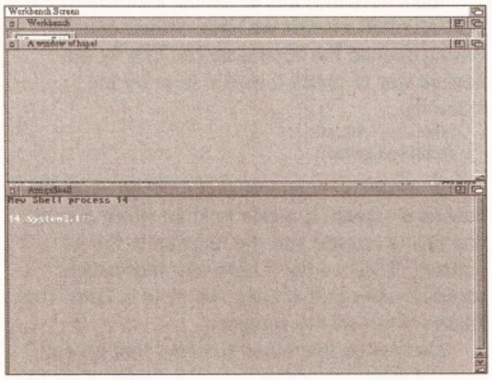
So that's intuition library access in a nutshell. Time to do something more productive with it, like opening a window. Let's have a look at the definition for the OpenLibrary function:

```
struct Window *OpenWindow( struct ☛
NewWindow *)
  D0 A0
```

We can see here, that we call the OpenWindow function with something in A0 which the intuition.library uses to decide what our window looks like. All being well, a magic number is returned to us which actually points to intuitions window information for the window you've just had opened. If intuition fails to open your window, then zero is returned.

Well, this is all very well, but what goes in A0? Well, this is where a reading knowledge of C is handy. I've viciously ripped the above definition straight out of the intuition.library autodoc file, which is available as part of the Amiga Developers ToolKit (Available from Commodore for 23 pounds, see last month). Although you don't need to know how to program C to program Assembly Language, it's very helpful, if only so that you can make head or tail of the official documentation, such as the Rom Kernal Manuals, or AutoDocs.

Let's look at the gobbledygook (Goodness, I have not used that word for a while. I wonder if it



The program in action! Opening windows is a fundamental part of programming on your Amiga.

still works?) line again:

```
struct Window *OpenWindow( struct ☛
NewWindow *)
```

This actually means "The function OpenWindow requires a pointer to a specially arranged block of memory, called a NewWindow structure. When it returns, it returns a pointer to a specially arranged block of memory called a Window structure." There. Easy. Sort of! Anyway, don't be alarmed. Let's look at a NewWindow structure in a form that will be a little more familiar to us, Assembly Language:

```
;
; — This is the definition for our new window
....
ShopperWindow: dc.w  100,100  ; Top Left Co-
Ordinates
   dc.w  320,100  ; Width and Height of Window
   dc.b  0,1   ; Detail and block pens. ☛
Ignored Kickstart 2+
   dc.l  IDCMP_CLOSEWINDOW ; What messages ☛
we want to hear about
   dc.l
WFLG_SIZEGADGET+WFLG_DRAGBAR+WFLG_DEPTHGADGET☛
+WFLG_CLOSEGADGET ; Window Flags
   dc.l  0  ; Pointer to first Gadget on ☛
Window
   dc.l  0  ; ** Ignore this one
   dc.l  sw_WindowTitle ; Pointer to window ☛
title
   dc.l  0  ; Pointer to screen to open on
   dc.l  0  ; ** Ignore this one
   dc.w  50,50 ; Minimum Width and Height
   dc.w  640,200  ; Maximum Width and Height
   dc.w  WBENCHSCREEN   ; Type of screen to ☛
open on.
```

It is pretty well documented, so you should be able to see what happening here. We're asking for a window 320 pixels wide, 100 pixels high, starting at 100,100 on the screen, with a sizing gadget, a drag bar, a depth gadget and a close gadget. In addition, we're giving it a title, it is to open on the workbench screen, and the minimum size is 50x50, and the maximum size is 640x200. You can tweak the numbers in this months listing to see how things change, and if you delve into the include file "intuition/intuition.i" you'll find the definitions for all of these, and much more information on the NewWindow structure.

The really odd thing in the above is the definition "IDCMP_CLOSEWINDOW", commented as "What Messages we want to hear about". We're jumping quite far ahead here, by a good couple of months, but hopefully the listing is commented well enough for you to follow what is happening. We are asking for intuition to tell us when the user clicks on the close gadget. When the user actually does click on the close gadget, intuition sends us a message.

This message arrives at a special place in memory called a Message Port. When we open a window and ask to be told about certain messages, intuition creates a Message Port for us. If you look in the listing, you'll see that we first wait for a message to arrive, then we receive it, reply to it and exit the program, after closing the window using the intuition function "CloseWindow".

Next month we'll be writing some useful routines to help us debug programs, and see what is going on inside them, such as functions to output messages to the screen, show numeric values, and so on.

We'll also delve inside logical operations, and revisit LSL and LSR, as well as their partners ROR and ROL (No prizes for guessing what these do), and some other goodies like ORing, ANDing and NOTing! So stay tuned, we'll be programming the AGA hardware directly in no time!

WHY WE USE A DEBUGGER

If this isn't an obvious question, I don't know what is. The correct answer is, of course "Because we wish to find bugs as quickly and efficiently as possible." Despite having access to debuggers, it's amazing how many people will spend hours looking through their source code for bugs, instead of getting the computer to do the work for them. Lets illustrate with a small example. Type in this program:

```
moveq #$00,d0
moveq #$00,d1
divu     d0,d1
rts
```

...now assemble it and run it. But before you run it, make sure you have nothing un-saved in the background, as your computer is going to crash with a GURU error something like "80000005". OK, if you're awake the chances are you've already seen why this happened. We're loading 0 into D0

and D1, and then dividing one by the other, which as we're all taught in school is impossible. You can't divide *anything* by zero, and since your computer is no miracle worker, and it can't either, it crashed.

If this error had been in a 50,000 line program with potentially a hundred or so divide instructions in it, it may take a fair while to find. Of course, it could be obvious, if it is, then you won't be needing help from Mr Debugger.

If you run this program through a debugger instead, such as MonAm (Which came with DevPac Lite on last months cover disk) then instead of crashing, the debugger would have stopped executing the program when the error occurred, and will kindly point out exactly which line contains the bug in question. Fixing the problem should be academic then.

So how *do* we run our program through the Debugger? Well, it varies depending on the assembler which you are using, but for DevPac Lite, instead of selecting "Run" from the Program menu, we select "Debug" instead. We then have a considerable amount of options open to us, which we will introduce over the following months, but for this particular program, we can run it a line at a time using "CTRL-T" (Hold Control down and tap T). When we finally run the divide line, MonAm will say "Divide by Zero" and stop. We can see exactly which line in the program caused the problem, and fix it quickly.

The moral of this story is, don't do work that the computer could do for you. Remember: Debuggers are there to help you. Personally, I don't leave home without one!

Here is a summary of the most common MonAm commands:

CTRL-R Run Program. Execution will stop at the first break-point, or when a serious error occurs. (Break-Points are little markers you can place whilst debugging, we will cover them in much more detail in later issues)

CTRL-Y Single step. This runs one instruction and moves forward to the next. CTRL-Y treats subroutine calls, using BSR and JSR, as one instruction, and does not follow the program into them. This is useful when you don't wish to follow an Amiga Library call into the operating system.

CTRL-T Single step. This works identically to CTRL-Y, except it follows all BSR and JSR calls also.

CTRL-Q Quit the program. This stops the current program you are debugging from running.

CTRL-C Quit the debugger. You can quit leaving the program you are debugging running, but whilst you're still learning, it is best to remember to quit your program properly using CTRL-Q instead.

CTRL-S Skip the current instruction. This passes over an instruction without running it. This is a very useful debugging tool when you want to see what happens if a particular routine or instruction is not executed, or if you know an instruction is going to crash the computer, but want to skip over it and continue regardless.

Of course, this is nowhere near the range of options which MonAm gives us. For those, you'll need to buy the program and get the manual (which is excellent, and I'm saying that without a single bribe being passed on from HiSoft!).

The two pictures show our program before we debugged it, and when we found the divide by zero error. You will see that all the information about the processor, including all register contents, are shown on the screen for us. For more information, call HiSoft on 01525 718181. AS

THIS MONTHS LISTING - OPENING A WINDOW

The symbol ☛ means do not type a return – keep typing to the end of the next line. ▼☛ means type a space, then keep typing to the end of the next line.

```
—>

—>
   ttl"Opening a Window in Assembly Language"
;
; ==========================
; Amiga Shopper Assembly Language Course, ☛ Part  V:
;
; Opening a Window using intuition.library.
; Tested with DevPac 3 and DevPac Lite.
;
     section  HelloWorld,code
;
ENTRY_POINT:   bra.s START ; Call ☛ start of program.
;
; — Embedded version string: ....
VERSION: dc.b  0,"$VER: window.asm 1.00 ☛ (30.11.94)",0
;
; — Include files ....
      incdir   "inc:"
      include  "exec/exec.i"
      include  "exec/funcdef.i"  ; You may ☛ not need this.
      include  "exec/exec_lib.i"
      include  "intuition/intuition.i"
      include  "intuition/intuition_lib.i"
;
; — Equates ....
_EXECBASE:  equ$04   ; exec.library base.
;
; — Macro Definitions ....
SYS:  macro
   move.l   _EXECBASE,a6
   jsr_LVO\1(a6)  ; exec.library access☛ macro
   endm
   INT:  macro
   move.l   IntBase,a6
   jsr_LVO\1(a6)  ; intuition.library ☛ access macro
   endm
;
; — Main Program: ....
START:   leaIntName(pc),a1
   move.l   #$00,d0  ; We're not fussed ☛ which version
   SYS         OpenLibrary
   move.l      d0,IntBase
   beq    EXIT  ;No intuition, amazing. Abort.
;
; — Attempt to open our window ....
   lea    ShopperWindow(pc),a0
   INT    OpenWindow
   move.l    d0,WindowHandle   ; Store window ☛  pointer
     beq    ST_NoWindow ; Couldn't open ☛ window, close int and exit
;
; — Wait for a message to arrive ....
ST_WaitMessage:   move.l    WindowHandle,a0
   move.l    wd_UserPort(a0),a0
   SYS   WaitPort ; Await news...
;
; — A possible message, process them all ....
ST_GetMessages:   move.l    WindowHandle,a0
   move.l    wd_UserPort(a0),a0
   SYSGetMsg
   tst.l d0
   beq.s ST_WaitMessage ; No message, go ☛ back to waiting
;
; — Got a message, since we're only ☛ listening for
IDCMP_CLOSEWINDOW,
;  it can be nothing else, so reply and then☛ exit: ....
   move.l    d0,a1
   SYS    ReplyMsg
;
; — All done, close window and exit ....
   move.l    WindowHandle,a0
   INT    CloseWindow
;
; — All done now, so close the library and☛ exit ....
ST_NoWindow:   move.l    IntBase,a1
   SYS    CloseLibrary
;
; — Now quit this program ....
EXIT: moveq #$00,d0   ; Exit program, no error.
   rts
;
; — Data for this program ....
IntBase: dc.l   0   ; Space for intuition library base
IntName: dc.b  "intuition.library",0   ; Intuition library name
;
WindowHandle:  dc.l  0  ; Our window magic ☛ number
;
; — This is the definition for our new window ....
ShopperWindow: dc.w  100,100  ; Top Left Co-Ordinates
   dc.w  320,100  ; Width and Height of Window
   dc.b  0,1   ; Detail and block pens. ☛ Ignored Kickstart 2+
   dc.l  IDCMP_CLOSEWINDOW ; What messages we want to hear about
   dc.l  WFLG_SIZEGADGET+WFLG_DRAGBAR+WFLG_DEPTHGADGET+☛
WFLG_CLOSEGADGET  ; Window Flags
   dc.l  0  ; Pointer to first Gadget on Window
   dc.l  0  ; ** Ignore this one
   dc.l  sw_WindowTitle ; Pointer to window title
   dc.l  0  ; Pointer to screen to open on
   dc.l  0  ; ** Ignore this one
   dc.w  50,50 ; Minimum Width and Height
   dc.w  640,200  ; Maximum Width and Height
   dc.w  WBENCHSCREEN   ; Type of screen to open on.
;
; — Our window's title: ....
sw_WindowTitle:   dc.b  "A window of hope!",0
;
; *** END OF PROGRAM ***
```

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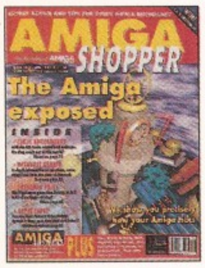
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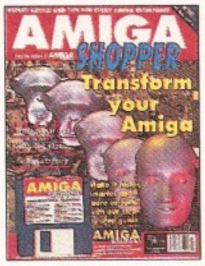
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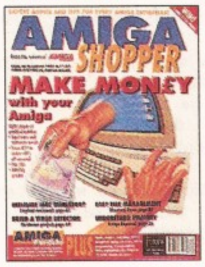
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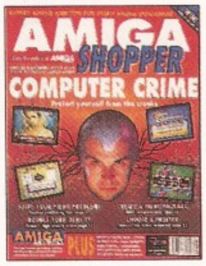
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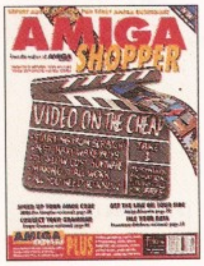
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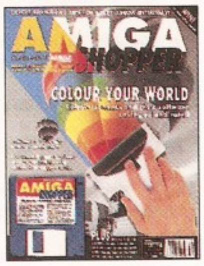
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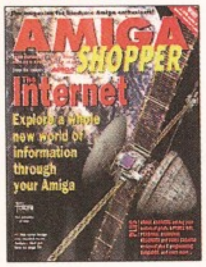
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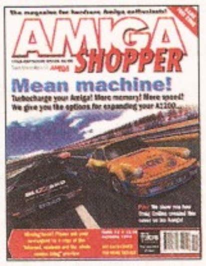
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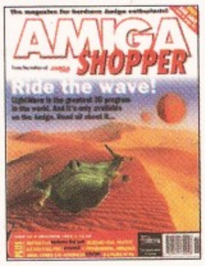
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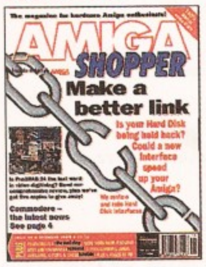
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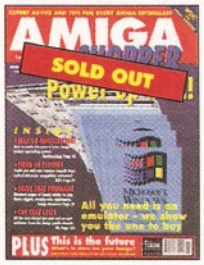
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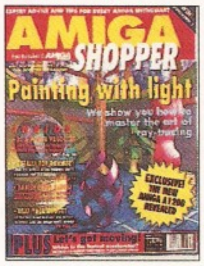
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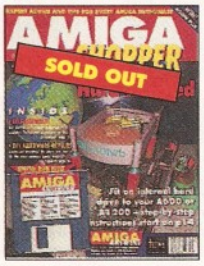
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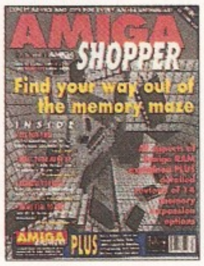
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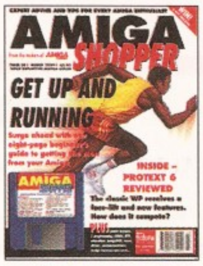
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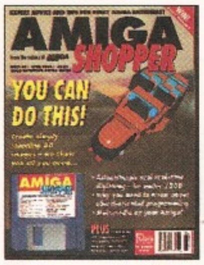
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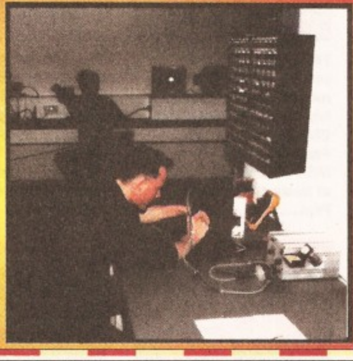
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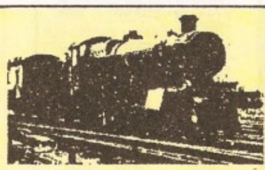
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Issue 46 - February 1995

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Word of the month – Callipygian.

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Talking Shop



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This month we have a bumper crop of letters on a wide range of subjects, so let's get straight in with a letter about the marketing of the Amiga...

MARKETING MANIA



I have read with much interest over recent months the suggestions regarding how the future of the Amiga can be assured. Many of us would agree that the machine has been appealingly marketed in the past. Our beloved Amiga didn't deserve Commodore, but unfortunately it got Commodore! However, while the idea of a massive worldwide marketing campaign is enticing, we surely must take a step back and examine the practicalities.

Which ever bid succeeds – and I hope to God it's decided by the time you read this – should result in a significant influx of investment; that the Amiga desperately needs. However, we cannot expect a bottomless pit of money to be thrown around on worldwide advertising in an attempt to steal a share of the PC market. Not only would that be extremely expensive, but what would it achieve?

From a business pint of view, 90% of the world's desktops have a PC sat on 'em, and if you think employers are going to throw all this gear away because of an Amiga advert, then I suggest your rose-tinted spectacles need cleaning. The Amiga has to find its niche elsewhere, it has to create its own market, and I would suggest that this is nowhere more dramatic than in the home.

It is clear that the PC is beginning to invade the home market, which has historically been the Amiga's stronghold. PCs come as an integrated package at a dirt cheap price; very tempting for the computing newcomer who is unlikely to consider that he'll subsequently have to pay £200 for any decent software. A friend of mine is considering buying a PC at the moment. I suggested the Amiga, saying: it was cheaper introduction; you can plug it into your TV until you can afford a decent monitor; it's fully multi-tasking; and the operating system is a breeze compared to Windows. "Sounds great", he said. "Can it run Word?" "Er... no" I suspect he'll go for a PC.

Given this rather desperate state of affairs, how does the Amiga fight back? Well, I guess the most important thing to do is consider where the best potential. Graphically, the Amiga is pretty much unbeatable. Commodore's replacement should use the fact that Amigas are the computer of choice for Hollywood special effects men and have been used in the making of blockbusters like Jurassic Park and Disney's Aladdin, as well as Star Trek, Sea Quest DSV and of course Babylon 5.

By directing limited advertising in the right areas, say for example magazines dedicated to the expanding camcorder market, the Amiga can start to find its feet again. Another more general area where the Amiga is strong is the (dare I say it) multimedia arena. Imagine the rumoured A1800 (that's and A1200 with built-in CD ROM drive) bundled with Scala for £350. The potential is mind-boggling, particularly as Scale are moving into interactive TV. In a loose partnership, both companies could become household names, which can't be bad.

The Amiga is not a PC and is unlikely to ever beat the PC in terms of numbers sold, but that doesn't mean the Amiga has to die, it just has to adapt and find its own way. If it doesn't, if it tries to take on the PC, then it will suffer the same fate as the Betamax video format in its battle with VHS – and remember, Betamax was a technically better system too.

Jamie Winter
Waterloovile, Hants

As you say, the Amiga is definitely technically superior to IBM compatibles in many ways. You don't have to comply to a 10 year old CPU architecture, for a start.

You can have the best product in the world but if you don't let people know about it, nobody is going to buy it. That's why it's very important for the new Commodore to get out there and start pushing the Amiga forward, as well as investing significant sums of cash in research and development. New models of Amiga? Who knows?

GENERATION GAPS

Your magazine is the one I prefer among the others so I've placed a subscription of which I've just received the first issue.

The reason I write is to give my point of view about the next generation of Amigas. First, let's consider the facts: the feat CBM intel died some months ago. Why? I'll give you my answer: a great computer is useless without great software (or without software at all!). Well, this rule applies to others: Remember the Sinclair QL, the Apple II GS (for graphics and sound), The Next computer, the Acorn Archimedes?

All these computers were great but most of their manufacturers didn't think about software. So they went down the drain. Note this also applies to some kind of software. Think about why MS-Windows is so successful and why OS/2 (from IBM) is only selling a tenth of Windows! Well, Windows didn't sell so much until Microsoft releases Word, Excel and the rest. For sure, without these two 'hits', Windows would have been another unsuccessful attempt... Well, I feel very clever to understand that rule of thumb while so many important bosses didn't, Huh?

Consider also the console world: in France, the CD32 is almost unknown. Kids only understand 'Sega' and 'Nintendo'. they don't understand the meaning of 'copper', Fat Agnus, Multitask, or ISO 9660. They buy a console because they've seen great games at their friend's home.

They first remember the name of the game and second the name of the console. Well, these console are common nowadays because both Sega and Nintendo have powerful software departments so they released a 'ready to play'

product: both the console and the games. Trouble with CBM is they haven't such department and you have to wait the information is available to programmers before you start having games in the stores. It's almost the same thing with 3DO and Jaguar in France while the playstation has a bright future since Sony is already prepared to make games.

So Amiga UK is now on two markets, console and computers: they should have at least the two corresponding software departments: *games and serious software*. Now let's see the programmers situation. You can't develop software without programmers. The Amiga is fairly complex machine that needs a lot of documentation for proper programming. As OS and chipset are (were) often changing, it's important to supply everyone interested in programming the docs. There is very little literature available compared to PC/MAC.

Moreover, it's extremely expensive (i.e. autodocs, RKM...). Why not edit books for the beginner and advanced up-dated with every OS release? I hope that with the increased availability of CD ROM players, Amiga UK, will make widely available throughout this media tutorials, examples, docs, compilers, assemblers, debugging tools and that kind of stuff. Make programmers and you'll get more programs!

Let's talk now about the hardware I think the Amiga should have in the next generation. First, as there will be no machine before 18 months, Amiga UK should enhance the A4000T with:

- a 68060 processor with optimised memory access (+cache memory?).
- a DSP
- a CD-player of course!

After all, in the PC industry, the Pentium is the hottest thing for one year or two. The DSP will follow the CD-players. These enhancement should lead to the release of OS version 3.2.

The CD 32+ should be a console with:

- 2Mb of fast RAM (total of 4 Megs).
- a DSP.
- RS 232 serial link (to play head to head which is much more exciting than playing alone, take advantage of the CD player with a normal Amiga).
- or better a low cost modem to play head to head through PSTN.

I think that the 680X0 Amigas should not disappear. Many people are not involved in image calculation. They only want word processing, spreadsheets, games and multimedia. The power of a 68040 + DSP +Amiga chipset is enough for that purpose. Moreover I think it would be dangerous to get rid of the 6800 software available for the Amiga.

The Amiga isn't strong enough for that. Apple is taking the chance but the PC industry probably won't change as fast because you don't play with a multi-billion business. Finally, I don't think that RISC 680X0 emulation will cope successfully with every program (most games).

Second, the RISC machines. In my opinion, the best choice is the Hewlett-Packard HP-PA series. These processors will be available in various flavour if there is demand: multimedia processor, and above all Intel X86 emulation (giving MS-DOS and Windows emulation). The HP-PA already support Windows-NT and Next operating systems.

So, if the next Amiga is designed with emulation in mind they cold become the state of the art emulation platform. (Maybe it is already with emplant!). That way, software shouldn't be a problem. As far as I am concerned, my next purchase is related to that fact.

- DSP should also be included with great software support (musical synthesizer, FAX, voice recognition, graphics & sound de/compression, number cruncher, games ...).
- Support for FLASH memories would be great allowing easy OS update (still expensive today, but within 18 months?)
- an I/O infrared link would be very nice allowing real use of the computer as a multimedia system. The FMV video player could be controlled from the sofa. Links with printers, HP-calculators, Amigas of alien computers (palmtops, organisers: no annoying wires!), VCR (for tape editing) would be possible. There is already a standard defined for this link it should be available on some computers very soon.
- Modem/Fax should be supported with low cost extra hardware.
- Ethernet (serial link 10mbits/s and more?) should be made standard on mid/high end professional / since computers.
- 16 bits sound support (in and out) as standard. (With low cost DELTA-SIGMA technology found on most CD-Audio players).
- Better monitors supports for mid-high end Amigas. There are not may monitors compatibles with all the graphic modes unless you have a flicker fixer.
- Last but not least: games support should be given so that you don't have to reset the computer each time (before and after!) You want to play. At least, there should be support for people who persist in hardware banging so their software works on every Amiga model, present and future.

Alex Boyen
Mennecy, France

Although Commodore's future is not clearly established yet, it is now reasonably sure that there will be one. So, it is a good question to wonder about the dream Amiga. Furthermore, we can be confident that the new buyer, having seen where and how Commodore felt, will have a keen ear on what their very loyal customers say they want as Amigas.

What is important in a computer – apart from the software you will win on it? Price, expendability, OS and ease of use. The latter two are rather well done in Amiga technology, though a multi-thread OS would be a lot better. We don't need virtual memory so much: RAM costs even less and less and virtual memory slows down things too much (it should be available separately, just as well equipped range of computer. Today, there is a price gap between the A1200 and the first 4000.

Jean-Pierre Rivere
Paris, France

It seems that French Amiga owners have a firm vision of the future, judging from these two letters. For more details of the current state of play with the Commodore buy-out, check our news pages, starting on page 4. Don't forget our cover feature this issue, which is about the rise and fall of Commodore. It starts on page 8.

BLEEDIN BLIZZARDS!

I'm a subscriber to your great magazine. Having read the Nov (43) issue with my usual interest I came across the review of the Blizzard 4030 50 MHz accelerator for the 4000. This interested me as I've recently purchased a 4000/30 and would like to increase the speed slightly (although I'm beginning to think that a third party graphics board would make a more noticeable difference in speed......).

Your review of the aforementioned board is ummmm rubbish... as is the data for comparison, which I assume must be a mis-print. If you look at the graphs for comparison you've got a 25MHz 030 going faster than a warp engine at 33 Mhz and a 50 Mhz 030...What r u on? It's impossible....you even say this yourself...'The 68030 fitted to the Blizzard runs at a nippy 50MHz, but it still can't get close to a 25MHz 68040'...not what your graphs say!

In fact, I can't see what the graphs show....unless the red bars are the 33MHz 68040 Warp board..the purple one's the 50MHz 68030 and the green are 25MHz 68030.

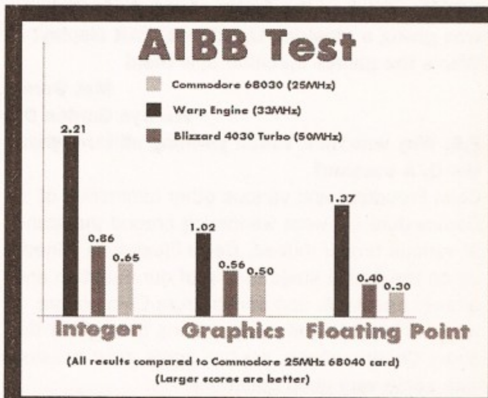
Any chance of you sorting this out are reprinting the correct figures? No doubt Blizzard would have a few things to say about the review, as you are the first mag to do so... (You may have done this in the Dec issue, which I see is available in the shops yesterday... when I get my subs issue through the post I can see... always seems to arrive in the shops earlier than the subscription issue...WHY? It doesn't matter where I am, in Bristol, Portsmouth or York...they never arrive before the shops get them!)

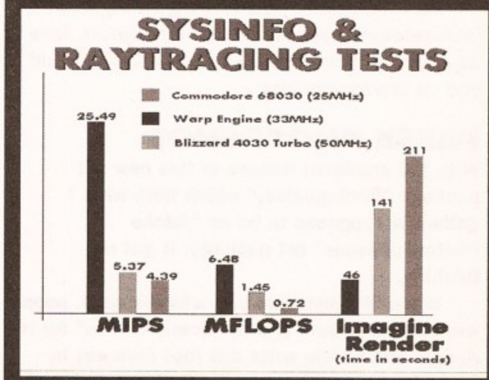
Oh well, back to simulating Atmospheric Gravity Waves....

Best wishes,
Jason Brown

Ahem. Unfortunately, we did get the figures mixed up on the Blizzard 4030 review. It's all John Kennedy's fault. Honest. I'll sort him out later.

Actually, you are only half right. Putting the memory on the CPU card only makes a real difference if you are using a 68040, as this has a





Here are the corrected grabs for the Blizzard review in AS43

SKINT AFTER XMAS? WOULD £25 HELP?

Personally I don't really bother with all of this Christmas lark, but I'm reliably informed that quite a lot of other people do. In fact, I also hear rumours that some people spend quite a lot of money on things such as presents, etc.

So, in the interest of spreading peace, joy and sums of money around the world, we are offering £25 for the best letter we print every month.

Fancy getting hold of this dosh? You'll need to write a good letter, so here's a few things we are interested in hearing about.

- **Tales of Bacchanalian overindulgence**
- **The new owners of the Amiga**
- **What your granny got you for Christmas**
- **The dream Amiga**
- **What the new year will hold for the Amiga**

serious bottleneck with motherboard memory. With a 68030 (such as the one fitted to the Blizzard 4030), the difference would not be that profound.

Anyway, on these pages you will find the graphs as they should have looked. Apologies for any confusion caused.

I CLAIM MY £5

Did anyone else spot Colin Proudfoot at the FES on Friday?

He was mooching around the Amiga stand (incidentally, why was the stand called Amiga, but yet they were giving away bags with Commodore on them? I thought Commodore were no longer in existence!)

I approached him and said, "It is Colin isn't it?" He replied, "Yes" shaking his hand, I said, "I didn't expect to see you here!" I then went on to say that we were all rooting for him and David Pleasance, and that we hoped they won the bid! He said "Thanks very much!"

Although the "Amiga Vs Pee Cee" debate is old news now, I've just got to say this! On the Pee Cee stand, all they could show *all* day was DOOM, whilst on the Amiga stand, Andy Bishop was giving a stonking LightWave/PAR display! Who's the games machine *now* then!

Mat Gorner.
Welwyn Garden City

P.S. Why was Nick Veitch yawning all throughout the Q/A session?

Colin Proudfoot and various other luminaries of Commodore UK were wandering around the stand at various times. Indeed, David Pleasance joined us on the Amiga stage in one of our question and answer sessions, and people from Commodore were on hand to answer questions throughout the show. Cheers, chaps. We had some good sessions with some very good questions.

PS – Nick Veitch was yawning throughout the Q&A sessions because he had a hangover. Take it as a lesson. Drink too much beer and you could end up looking like him...

PASSE PHOTOSHOP

With the imminent release of this new art package "Photogenics," which from what I gather, is supposed to be an "Adobe Photoshopesque" art package. It got me thinking.

When "Pagestream V3" was released, people were led to believe it was "Quark XPress" for the Amiga, and all the write ups (not reviews) in magazines were plugging it's features and saying that it might even be the *best* DTP package on *any* computer. Wow!

I even had a hardened Mac user come up to me after talking to him about it, and say: "That new DTP package you were on about, It can't be as good as Quark, can it?" It got him thinking! But as it turned out, it wasn't. (Damn!) It looked the part, just didn't play it, that's all.

The point is, why are there so many missed opportunities with Amiga S/W? Pagestream had the chance of making Amiga S/W respected a little more. But it's premature release only hurt the reputation of Amiga S/W even further.

It's not as if the Amiga isn't capable of running such applications that are available on say the Apple Mac, and let's face it, Mac S/W beats Amiga S/W hands down. (With the obvious exception of LightWave/ImageFX etc. of course!) I sincerely hope, when "Photogenics" is released, it is:

A. Finished! (Unlike "Pagestream V3!")

B. Isn't fraught with bugs. (Unlike "Pagestream V3!")

C. Does what it says it's going to do, and what everyone expects it to do. (Unlike "Pagestream V3!")

D. Is as good (no, even better!) Than "Adobe Photoshop!"

Another thing! I know this is a serious-only mag, but why is it that SimCity 2000 for the Amiga is very slow? The Mac has the same processor as the Amiga, has *no* custom chips helping out, a nice looking, but clunky OS, and yet, it's still faster than the Amiga version, why? It has no reason to be – was the Amiga version rushed?

It's no wonder Amiga S/W is scorned upon, developers are expecting miracles when it comes to sales. What developers should (and may already do) is not to simply look at existing Amiga S/W when benchmarking against their own release, but to look and compare with S/W on different platforms. The Mac is a good platform for this, because it's S/W is so professional looking. (Pity it's so expensive thought!)

Matt Gorner
Welwyn Garden City.

For a closer look at Photogenics, check out or review on page 28. I agree with you about Pagestream. Although there have been a number of patches to the program, it is still rather unstable and many people (including myself) have been disappointed.

We went into the reasons why Soft Logik chose to release the program as it is in our feature on the program in issue 43, so I won't go over them again. Suffice to say that although Pagestream 3 promises great things, it has not yet managed to deliver.

Photogenics over Photoshop? Well, given that Photoshop costs a lot more (around £580 against around £60 for Photogenics) and has rather more upgrades than photogenics, I think it would be a little bit overambitious of Almathera to start challenging Adobe at their own game yet. However, it does look pretty good...

FILL 'ER UP!

I'm interested in the AMOS game 'High Octane' which was briefly covered in Amiga Shopper issue 43 by Simon Green in his AMOS Action column.

The article mentioned the names of the authors, and how to obtain the game and source code. However, I didn't find any address to send my request to. Could you please supply me the address where I can obtain their program?

Yours sincerely,
Jan Lubbers

The AMOS PD game "High Octane" should be available from any good PD library, or from any decent BBS. If you are on the Internet, you should be able to find it on any one of the Aminet sites. The UK Aminet site is at FTP.DOC.IC.AC.UK. The source code to the program is only available directly from the programmers.

Details of how to contact them are included with the game. This is probably also a good a time as any to tell you a few other things about *Amiga Shopper*. As of next month, you will see a few changes in this magazine. for a start, you will notice two disks on the cover.

These will contain the best serious Amiga stuff that we can get our hands on, including full commercial programs, PD and Shareware and programs and files to help you get the best out of both these coverdisks and those on Amiga Format.

Not only that, but we are also going to be printed on glossy paper. We will continue to concentrate exclusively on the serious side of the Amiga, with the same mixture of authoritative reviews, excellent tutorials and stonking supertests that make Amiga Shopper the worlds most fab serious Amiga magazine.

Plus, we will also be carrying extensive tutorials on how to get the most out of your coverdisks. For instance, next month we will be giving you the full gen on AMOS Professional, with 10 pages of expert advice on how to use this powerful programming language. Stick around. We think you'll like what you see. AS

CONTACTING THE TALKING SHOP

To add your contribution to any of the debates going on in this page, send your letters to :

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Alternatively, you can E-Mail them to :

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2:2502/129.1 (FidoNet)
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All letters received at these addresses will be considered for publication unless you specifically advise us otherwise.

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THE QUESTIONS

1 – Which company publishes Photogenics?

2 – How old is Paul Nolan, the author of Photogenics?

3 – Photogenics cannot load JPEG files. True or False?

All of the answers to these questions can be found somewhere in our review of Photogenics on page 28. This competition closes on February 10th 1995. All the usual competition conditions apply. Have a nice life!

The winners are...

We have two competitions to announce the winners of this month.

For our Lightwave competition, the two copies of Lightwave go to: N Connoly and M O'Connor of Dublin.

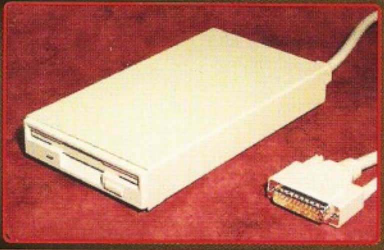
The other prizes of DKB Megachip boards go to M Sanford of Inverclyde and R Swingwood of Colchester. The five copies of the excellent Lightwave Collection from the 24 Bit club go to: N Connoly and M O'Connor of Dublin, S Etchells of Edinburgh, M Woodward of Stalybridge and Steve Bowman of Colonge.

The ProGRAB 24RT competition elicited an extremely good response, but there can only be five winners in the end.

Congratulations to: Chris Henden of Newport, David Ledger of Canvey Island, Alfredo Martins of Portugal, A Pike of Bury and Chris Foote of Surrey. Your prizes will be on their way shortly!

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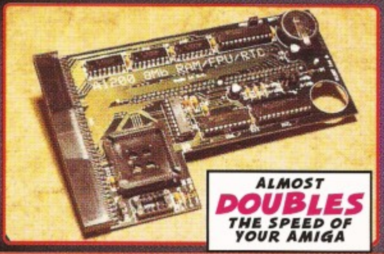


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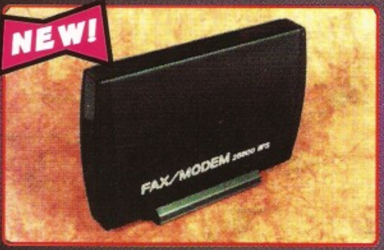
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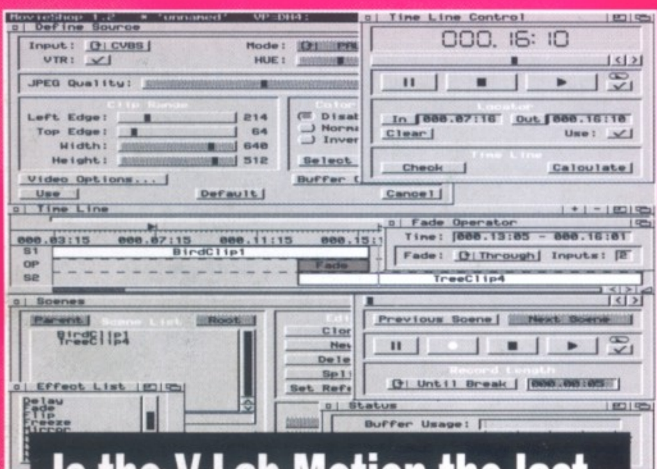
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CHEQUES SHOULD BE MADE PAYABLE TO WIZARD DEVELOPMENTS.

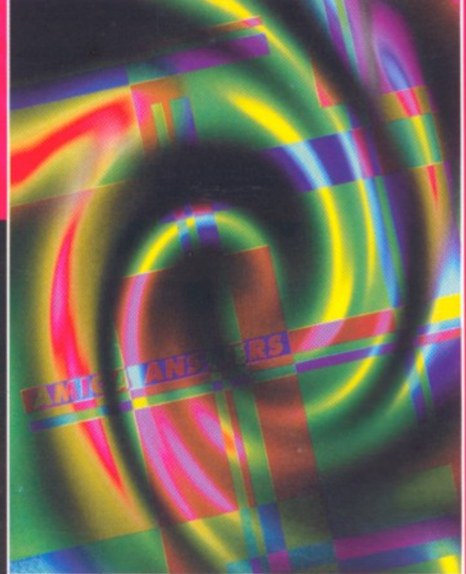
What really happened to Commodore International? Why did they go into liquidation? What has happened since? Where is the Amiga going? Find out the answers to all of these questions on page 8.



Is the V-Lab Motion the last word in non-linear digital video editing? Or is it the Betamax of the nineties? We investigate on page 18.

3D is a doddle with the latest instalment in our series on the basics of 3D with Mojo of Foundation Imaging. The people responsible for the stunning graphics in *Babylon 5* let you in on a few professional secrets on page 32.

Problems? You've got them. Answers? We've got them. Turn to page 49 for our solutions to your Amiga problems.



Which graphics program could turn you into a Michelangelo? We investigate three new programs, starting on page 26.